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Contents

The Three 'R's of Social Capital: A Retrospective

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Despite the wealth of studies on social capital, an inclusive understanding remains necessary. With this objective in mind, this study employs a qualitative approach and, after reviewing the evidence, proposes an integrated view of social capital. From that integrated view, social capital appears to be a holistic concept: as a collection of resources, relations, and returns that can be mobilised as a result of agents' actions and contacts in an agent-controlled system in accordance with mutually agreed-upon but reinforced rules, obligations, and norms in order to access a range of social potential. Essentially, this definition of social capital emphasises three components: resource, relation, and return, while also emphasising the importance of actions and contacts. Given how significant it is that the concept of social capital is constantly evolving and that researchers in this field have continued to study it, it is essential to comprehend the concept of social capital as a whole and to recognise its defining features. As a result, the insights gained from this article can be applied to the study of social capital in sociology, economics, and related fields, advancing theoretical frontiers .

Keywords: Social Capital, Review, Qualitative Approach, Sociology, Economics

Numerous facets of contemporary society have evolved over time, one of which is an understanding of how important social relationships are to living in a society. People interact with one another, share resources, and solve problems collaboratively, all of which have ramifications for global society's norms, expectations, and responsibilities; understanding social capital is facilitated by these realities. For more than two decades, social capital has been a major theoretical construct in social science. With its ability to provide light on a wide spectrum of issues, including communal profit maximisation and the well-being of democracy, it has become immensely popular (Hommerich & Tiefenbach, 2018; Woolcock & Narayan, 2000; Nahapiet & Ghoshal, 1998). Due to the combination of sociological and economic ideas, social capital has a broader theoretical scope, allowing academics and others to appreciate the importance of social resources in economic interaction while applying economic concepts to social behaviour. Another factor contributing to social capital's popularity is the growing number of economic concerns that are intimately related to social interactions as a result of globalisation (Ayios, Jeurissen, Manning, & Spence, 2014; Gabbay & Leenders, 2002). This suggests that the concept of social capital has matured into something more complex, calling for additional study (Claridge, 2018).

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However, there is an inherent tension in the conceptualization of social capital as a result of the breadth of its empirical application and the diversity of operational approaches employed by various schools of thought (Sharma, 2014; Briggs, 2007). In fact, due to the innate ambiguity and complexity of defining social capital, the lack of consensus over its nature impedes social capital research. Additionally, many academic disciplinary perspectives on this concept interact, including those from economics, sociology, and related fields. As a result, despite the abundance of literature on the subject, comprehending the distinctive features of its definition remains an open question.

Social capital is a metaphor that dates all the way back to the structural interpretation of social relations (Toyon, 2021; Claridge, 2018; Kazjulja & Roosalu, 2010). Another foundation for the concept can be found in the tradition of social network analysis, which can be seen in the theory of exchange as well (Häuberer, 2011; Kazjulja, 2002; Hansson, 2001). The concept of social capital evolved as a result of terminological borrowing from economic disciplines; the reworking of the economic concept of 'capital' through the lenses of 'social' made the concept of social capital more intricate (Portes, 1998; Becker, 1993; Jacobs, 1961; Schultz, 1961). Bourdieu (1986) presented social capital as a useful theory for evaluating how economic, human, cultural, and symbolic capital all function as mechanisms for institutionalisation of inequality. Coleman (1990; 1988) integrated social capital to economic study on social action and human behaviour. Network sociologists (Lin, 2001; Burt, 1992; Granovetter, 1973) have made essential contributions to the study of social capital's structural nature. Putnam's works (2000; 1995) proposed collective strategies for analysing social capital and its productive function in a variety of collaborative human activities. Fukuyama (1999) have had a substantial impact on the current academic discourse on the nature of social capital.

To summarise, understanding social capital is a critical topic that necessitates an examination of many perspectives from prior research and the development of internally coherent views. This paper examines social capital concept through a review of published works, noting their limitations and complexities rather than simplifying them, and offers an integrated view for future social capital research. The remainder of the paper has been organised and presented in four key sections: the next section explains the method; the section that follows it explores classical notions of social capital; the third section offers an integrated definition and framework; and the final section concludes the paper.

Method

This study followed several steps to attain its goal. The stages depicted in Figure 1 were adapted from previously published sources (e.g., Gasparyan, Ayvazyan, Blackmore, & Kitas, 2011; Khan, Kunz, Kleijnen, & Antes, 2003) and then adjusted, modified, and implemented to meet the objectives of this paper. The approach was chosen because it is conducive to accomplishing the paper's goal and because similar strategies have been employed in recent research (Moorthy & Naidu, 2022; Bahadur & Akhtar, 2021). At the first step, this study has set a question: Does reviewing the classical understanding of social capital lead to an integrated view? In order to answer this question, it is necessary to first identify the pioneers who have contributed to broadening the notion of social capital, then identify their significant works, and finally determine which specific aspects of their definition of social capital allow for the construction of an integrated explanation. Since social capital is an interdisciplinary and evolving notion, it appears to be difficult to simultaneously examine studies from multiple academic domains and compile the findings into a single paper. As a result, expert assistance was sought in the second step.
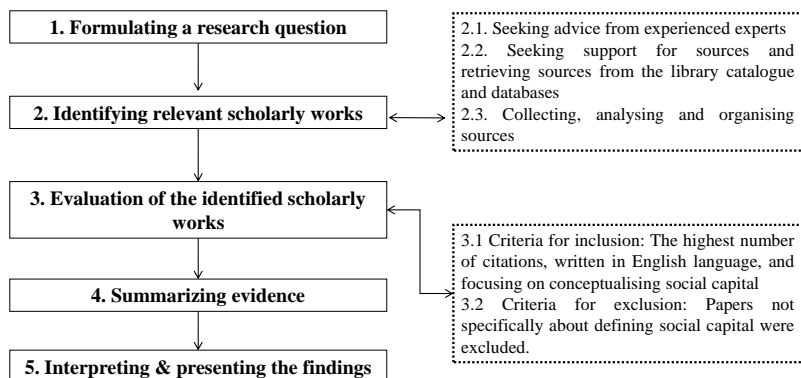
Figure 1: Review steps adapted to this study (compiled by the author based on literature)

All four specialists were approached through a snowball process among academic acquaintances, and they were chosen for their involvement in the delivery of social capital management courses, either directly or indirectly. Each one hails from a different university, with one coming from the economics department of a Bangladeshi university, one belonging from the economics department of an Estonian university, and two coming from the sociology department of an Indian university, respectively. Online discussions with these experts were undertaken for implanting supplementary stages (e.g., see Figure 1: steps 2.1-2.3). The experts' conversation began with their perspectives on social capital, followed by their comments on the concept's originators and the resources they believed should be included in the social capital introductory course. Each expert had a one-hour conversation, which laid the groundwork for the identification of relevant publications, particularly those pertaining to classical ideas of social capital. However, despite the fact that experts were contacted and interviewed within the period of July 2021 to January 2022, the materials (i.e., books, chapters, articles, websites) that were suggested by them did not adhere to any year restrictions. An initial list of 120 published works was compiled with the intervention of the experts interviewed. The publications with the largest number of citations, written in the English language, and focusing on the conceptualization of social capital were chosen for further examination and narrowed down to 40, which were then retrieved through various electronic databases (e.g., WorldCat, ScienceDirect, Semantic Scholar, and Google Scholar). Nine of the forty published works were designated as pioneers and represented the classic perspective of social capital, while the remaining served as supplements.

Results

Classical Conceptions of Social Capital
Hanifan's idea of social capital in community relations
Hanifan (1916) coined the phrase 'social capital' to refer to the potential role of interpersonal relationships. He concluded that a lack of social capital was to blame for the problems that schools had enrolling migrant children from low-income families and for the overall disinterest in education among rural communities. He argued that the presence of social ties among educational actors, the local community, and governmental authorities was crucial to educational achievement. Hanifan (1916) did not define social capital precisely;

rather, he referred to it metaphorically as 'goodwill', 'fellowship', 'mutual sympathy' and 'a rural community'. Hanifan (1916) noted that intimate ties between members of local communities and formal institutions (such as schools and local governments) assist local citizens in a variety of ways. Additionally, he emphasised the importance of social contact as a source of resources for individuals and groups to improve their living situations. In essence, social capital, according to Hanifan (1916), contains a community component in addition to the acknowledgment that it benefits both individuals and communities. However, community components are subjective and place an excessive emphasis on the results rather than the reason.

Loury's perspective on social capital in structural competency

Loury (1977) drew a connection between social capital and the legacy of slavery in society. He contended against the premise of equal opportunity in American society, arguing that capital reproduction is conditional on social structure. Social capital, in his view, is equivalent to the surrounding effect and social structure. According to him, an individual's social environment has a considerable impact on the level of performance that persons with similar skills can achieve. This implies that absolute equality of opportunity, in which an individual's prospects of success are solely determined by his or her skill, is unrealistic. The social origins of an individual have an effect on the amount of capital invested in his or her skill. In this context, social capital appears to relate to the influence of an individual's social status on the acquisition of conventional human capital. Following that, Loury (1977) defines social capital as structurally existing social relationships between people that foster the development of a particular set of abilities or qualities. Indeed, from Loury's (1977) perspective, everything (e.g., age, gender, education, health, civic involvement, and environment) that influences a person's capacity to develop into a social being has an element that contributes to the production of social capital. However, he also views social capital, along with material and financial well-being, as a factor in sustaining social inequality. Despite the fact that his work (1977) did not provide a full explanation of social capital, his analysis did indicate only a rhetorical connection between social interactions and a specific form of capital.

Social capital in Bourdieu's class perspective

Bourdieu (1986) established social capital as a theoretically informed sociological concept. Capital and habitus are the two important aspects in Bourdieu's view. Capital is linked to field (social space), and habitus is linked to actions (assimilation and generation of practices). Capital and habitus determine an agent's social position. It indicates the agent's position in the field, power over the field, and level in the hierarchy of dominance and legitimate coercion. His theory of capital categorises it as economic, social, and cultural capital. In fact, cultural, social, and symbolic capital are all intertwined in Bourdieu's view. Social capital is a collection of actual or potential resources associated with belonging to a group that has been more or less institutionalised, such as having shared connections and endorsements (Bourdieu, 1986). Bourdieu's concept of social capital is oriented on maximising individual gains through group engagement and systematic social competency development. He explored social capital through the lens of social class and highlighted how the ruling class maintained and regenerated group cohesiveness and group supremacy through mutual recognition. Investing in social relationships, he believes, serves the objective of altering self-interests into superior utilitarian and legitimate ones (Bourdieu, 1984). As a result, actors can leverage social capital to gain access to economic resources, build cultural capital, and form strong bonds with institutionalised groups. Acquiring and investing in social capital is dependent on the size of an actor's network of relationships as well as the quantity

and quality of economic, cultural, and symbolic capital held by those with whom it is connected. Thus, social capital production and replication require a continual commitment to social actions, which includes time and energy investment, as well as direct and indirect consumption of other resources (Bourdieu, 1986). However, there is a contradiction in Bourdieu's perception: he ultimately reduces all three categories of capital (cultural, social, and symbolic capital) to a single form of capital (economic capital), oblivious to the distinct worth each of these capitals possesses.

Coleman's functional perspective of social capital

Coleman (1988) presented an alternative perspective on social capital, which is based on a functional interpretation. The value of social capital is determined by the functions that it performs. He demonstrates how social structure constrains rational action and how social structure evolves as a function of people's individual interest maximisation. Coleman (1986) argues that trust is necessary for rational choice because its presence and the social relationships that sustain it constrain subjects' opportunistic behaviour. The nature of social networks can influence the level of trust between members, meaning that the socio-structural context can shape social and economic behaviour. According to Coleman (1990), individuals' trust means that they have mutual obligations, which are enhanced by their ability to inflict sanctions on one another. Individuals can use such promises to gain the support of other individuals, thereby strengthening their power and influence. Coleman's perspective has at least two decisive weaknesses: First, by defining social capital in functional terms, he constructs a conceptually perplexing chain of cause and effect. As a result, Coleman's concept provoked disputes concerning the oversimplification of social capital (Gabbay & Leenders, 2002). It cannot be ignored that multiple causes can end in the same result, or that the same cause can yield different effects under different situations, and so functional definition requires thorough empirical investigation to sort through the alternatives. Given that social capital's effects can be measured, it is conceivable to say that it does not always lead to productive or beneficial outcomes (Brown & Ashman, 1996). Second, Coleman's approach leaves open the possibility of numerous, even contradictory, interpretations being rebranded as social capital (e.g., Portes & Landolt, 2000). Social capital covers both the mechanisms by which it is realised and its repercussions, as well as the social organisation that serves as a backdrop for the concretization of causes and effects. Coleman (1988; 1990) makes no distinction between resources and the capacity to obtain resources as a result of participation in various social networks. This issue can be approached methodically by distinguishing between the owner of social capital, the source of social capital, and social capital itself. Due to Coleman's conflation of the three aspects of social capital, the concept's application and scope were left ambiguous (Portes & Landolt, 2000).

Portes's structural embedding of social capital

When it comes to obtaining scarce resources, social capital acts as an individual's capacity and makes it available through their membership in a network or the broader social structure; this embeddedness is a source of social capital (Portes, 1998). Portes's perspective (1998) is similar to that of Granovetter (1985) in that he distinguishes between rational and structural embedding. During the process of social capital mobilisation, it is players' shared expectation, based on their connection, that they would be successful in driving the other party to fulfil their obligation. In a wider network where participants are structurally embedded, trust grows as mutual expectations are realised, and the larger community places different sanctions on what is known as enforceable trust (Portes, 1998). Fear of sanction is a strong motivator for enforcing reciprocal obligations as well as enforceable trust. His work (Portes & Sensenbrenner, 1993) also establishes a link between the rational-egocentric and

social-structural accounts of social capital's nature. Instead than focusing solely on the actions of profit-maximising individuals, a more comprehensive macro explanation was provided by introducing the concept of limited solidarity. Portes and Landolt (2000) found inequities in the social networks that connect individual actors. These inequalities come from the social networks in which they operate and their level of engagement. This perspective considers social capital as a dynamic resource influenced by both individuals and their social networks. Portes (1998) also investigated factors that lead to the depletion of social capital in social networks. The social connections that enable a person to mobilise the resources of a social network also place obligations on the individual with regard to other social network members that may degrade social capital. From a collective perspective, this may result in a free rider issue. For instance, other members of the social network may make demands on an individual, exploiting their resources in exchange for nothing. However, Portes's (1998) idea of social capital also has certain limitations. He compares and contrasts the qualities of social connections between different selves. He attributed these distinctions to the ego and the degree or kind of embedded network, a causal reciprocal outcome between self and social structure with no beginning or end.

Putnam's communitarian approach to social capital
Putnam (2000) defines social capital as a public good and virtue that promotes collective and public goals such as a functional democracy, economic prosperity, and societal cohesion. In addition to physical and human capital, his communitarian perspective argues that social capital refers to components of social institutions such as trust, norms, and networks that facilitate coordination and action and hence improve social well-being. In order to address the problem of collective action, it is essential to develop strong networks of citizen engagement that foster community confidence and facilitate democracy (Putnam, 1995). Such engagement also establishes a cultural norm for future collaboration, as civic participation in the network demonstrates previous cooperative achievements, and social capital is a by-product of that. That is, civic engagement is a proxy for social capital in a community (Putnam, 2000). His devised social capital index also incorporates indicators of inhabitants' political engagement, such as voting, parent-teacher associations, labour unions, religious groups, and hobby club activities, among others. However, Putnam's concept of social capital also has some boundaries as his social capital measurement ignores alternative forms of civic engagement (Fukuyama, 1999; 2001). For instance, individuals may have lost their excitement and dedication to civic involvement; in fact, when problem-oriented political movements gain traction, individuals get increasingly interested in specific political and civic activities. Putnam primarily ignores class and intra-organisational dynamics as well as cultural differences in the stock of social capital. Indeed, it is precisely as a result of this dynamic that numerous civic organisations have formed, existed, and eventually perished (Fukuyama, 2001).

Burt's notion of social capital in 'structural holes'
Burt's work (1992) systematically established the principles of social capital from a network perspective. Social capital, in his view, refers to the quality of social networks that enables individuals to obtain resources. The structure of a social network is crucial for resource distribution among its members, which is why it is critical to analyse whom and how members are connected, how frequently and in what form contacts are maintained, and the network participants' positions (Burt, 1992). It is the relative lack of connections, which he refers to as 'structural holes', that drives the actions of individuals, the acquisition of information, and the mobilisation of resources. While Burt's interpretation of the network notion recognises the value of closed social networks, it does not regard them as a source of

their accumulation (e.g., Bizzi, 2013). Closed networks are critical for retaining social capital. Outsiders who are not members of the closed social network can only gain access to the social capital through a structural hole or by sponsorship. In the first scenario, significant communication barriers exist, resulting in high costs and uncertain rewards. In the second case, a high-ranking member of a network recommends a new member. As a result, the agent can access the social capital of the network without incurring contact costs.

Social capital in Fukuyama's collective action

Social capital, in the view of Fukuyama (1999), is a component that adds to the efficiency of economic activity at the level of communities as well as specific ethnic and social groups. His view of social capital is based on norms and expectations, and he empirically reduces it to the level of trust that people have in one another and in society. In reality, he argued that social capital is a reinforced informal norm that fosters collaboration between two or more individuals and is made up of norms ranging from simple reciprocity between friends to complicated and elaborate beliefs like Christianity. Fukuyama's primary interest is in the cultural manifestations that give rise to social capital by passing down social norms from one generation to the next, as well as the influence of historical conditions. He analyses the process of social capital accumulation, which, in his opinion, is determined by the culture and actions of social institutions, most notably the state. In his opinion, one way in which social capital can be accumulated is through globalisation, which allows civil society organisations to share their knowledge and work together across national boundaries. In contrast to Putnam, who saw social capital as simply derived through the voluntary affiliation of persons, Fukuyama widens the spectrum of plausible sources due to cultural characteristics. Simultaneously, because social capital is defined in terms of culture (norms and values) and social association, this is an identical argument to Putnam's work (1995) and is similarly inadequate for a holistic understanding of social capital.

Social capital in Lin's resource orientation

Social interactions provide resources in the same way that education and culture do, and vice versa. According to Lin (2001), there are two types of resources that people can acquire and use: one is the individual's personal resources, which include skills, academic qualifications, and the other is social relations. Lin (2001) views social capital as having three components: structural, opportunity, and action-oriented. He sees social capital as a resource that may be used to achieve a purpose. Individuals' abilities allow them to access social resources, and their deliberate use of these resources determines their value. Resource consolidation and loss prevention are two advantages of expressive social action. Lin (2001) divides resources into two categories, such as network resources and contact resources. The former are directly accessible to social network members, whilst the latter represent an individual's resources when engaging in instrumental behaviours (e.g., job searching). While network resources are easily accessible, contact resources must be deployed. The power, wealth, or professional status of the contact persons who mobilise particular resources can serve as a quantifiable indicator of contact resources. However, Lin's (2001) perspective of social capital as an investment with an expectation of return is equally problematic as it is suspicious of functionalism (Häuberer, 2011). If all social acts were rational, they would inexorably slip into the swamp of rational choice theory. Indeed, one of the characteristics that distinguish social action from economic action is that the former frequently results in unforeseen consequences. For instance, when individuals invest in social capital, they may be unable to precisely forecast probable outcomes.

An Integrated View of Social Capital

The aforementioned classical concepts serve as a framework for deliberately exposing the conceptual contradiction inherent in social capital. At least two distinct theoretical schools of thought can be recognised. According to one school of thought, social capital is a property of social structure manifested through social networks, and the primary goal of those studies (Lin, 2001; Portes, 1998; Burt, 1992; Loury, 1977) is to probe the mechanisms by which social networks perform the function of social capital. Another school of thought considers social capital to be a collection of social norms and values, as well as an individual's capacity to form associations that facilitate effective collective action. The goal of those studies (Fukuyama, 1999; Putnam, 1995; Coleman, 1988; Bourdieu, 1986; Hanifan, 1916) is to recognise the forms of social norms, relations, and public associations that are responsible for this effect. However, as a result of the previous section's discussion of social capital, it should be evident that a variety of scholars have addressed a variety of questions about social capital, with responses that are not always consistent. In this sense, social capital is inextricably linked to the concept of a scholar, which is why there is no universally accepted definition. There is, nevertheless, space to propose a more comprehensive approach to succeeding conceptualizations of social capital. This section attempts to define social capital holistically using the aforementioned literature, but not before mentioning some of the problematic features of social capital definitions identified during the review process.

Scholars (Lin, 2001; Portes, 1998; Loury, 1977; Burt, 1992) argue from a structural viewpoint that social capital is a critical aspect in understanding how social stratification is reproduced; social capital is characterised by the accumulation of networks, membership, and wealth. This makes sense when all members benefit from reciprocal relationships. That is why other scholars (Fukuyama, 1999; Putnam, 1995; Coleman, 1988; Bourdieu, 1986; Hanifan, 1916) have emphasised the importance of human connection and the reinforcement of reciprocal recognition and affirmation in order to demonstrate how individuals leverage socio-structural resources to achieve superior action results. By incorporating concepts like trust, norms, sanctions, and authority — all of which are inherently context-dependent — this perspective emphasises the communal component of social capital, whereas articulating such terms objectively often overlooks the subjective component.

The value of social capital is determined by taking into account a person's social networks and the resources they have access to (Lin, 2001; Fukuyama, 1999; Burt, 1992; Loury, 1977; Granovetter, 1973). As a result, the evaluation places a higher value on the wealth, power, and position that people in networks and relationships possess. Wealth, power, and social position are all considered valuable resources in the social resource concept (Foa & Foa, 2012). A person's job title or income is also taken into account when determining a person's financial and social well-being. This means that when assessing social capital in this way, the quantity and quality of their social profiles are taken into account. There is a concern that social inequality might return, and only instrumental action can be proven to benefit from both network and relational resources in this case.

When social capital is invested, it can have both good and bad effects on both the person and the group as a whole. According to social capital theorists (Fukuyama, 1999; Putnam, 2000), people invest in social capital so that they can get benefits in the future. Within this rationalist viewpoint, social capital can be viewed as the result of rational individuals' interactions. People interact with each other and change their actions to meet the needs of the other person. While it is necessary to view choice as a means of maximising gain, it may not be prudent to view the line of action as a logical calculation based purely on some

form of rational rule. The assumption that only reason drives choice can be employed in a bounded rationality paradigm. Weber (1978) says that people's actions tend to be more common or habitual than rational. The only way to understand irrational behaviour is to think about it in terms of logical actions first. The rules of human relations are important, yet rational viewpoints ignore them. They must deduce causes from effects, which traps them in structural functionalism.

Due to restricted social arrangements or structural gaps, social capital may become ineffective. Non-members of the group can be charged a higher access fee (Portes, 1998). For instance, strong group ties frequently prohibit outsiders from gaining access to specialised social resources. Additionally, individual liberty may be sacrificed for the greater good of the group. Individuals may become submissive to the collective or even assimilated into the group as a result of social relations. Members of a closed group or community may find themselves unable to innovate or advance as a result of the group's or community's lack of openness. Individuals with higher ambition and inventiveness may be forced to leave their familiar groups and communities, even if group solidarity and membership in the group remain relatively stable.

Until now, the discussion's intention has been to substantiate evidence concerning several schools of thought on social capital, as well as their parallels and peculiarities, in order to prose an integrated view that emerges from them. The aforementioned literature establishes the interpersonal nature of social capital and the structural and functional conditioning upon which this article proposes to define social capital as a collection of resources, relations, and returns that exist in reality or potentiality and can be mobilised as a result of agents' actions and contacts in an agent-controlled system in accordance with mutually agreed-upon but reinforced rules, obligations, and norms in order to access a range of social potentials. Essentially, this definition of social capital highlights three major components: resource, relation and return. The requirement for actions and contacts is also brought to light, more explanation of which can be found in the subsequent section.

The Antecedents of the Three 'R's
To understand the holistic view of social capital presented in the preceding section, including the three-R, it is necessary to first appreciate its antecedents, which comprise actions and contacts that transcend these three constituents, i.e., resource, relation, and return.

Action and Contact
To comprehend social capital, it is crucial to rethink it as rooted in social situations comprised of action and contact within a specific social space. The space where the 'game' takes place is called a 'field' (Bourdieu, 1986). Action and contact result in the formation of relations (Haslam, 1994) and, consequently, the accumulation and investment of social capital (Bourdieu, 1986). To understand why an actor acts in the way he or she does, Bourdieu (1986) abandons the mechanistic action perspective of the structure, instead favouring an openness of the game that necessitates all of an actor's actions in the game being taken into consideration. Methodological individualism makes the actor a fully rational creature, in contrast to this. When it comes to valuing capital, there is no one-size-fits-all approach. That means, understanding social action necessitates taking into account both determinism and spontaneity. Social agents' agency is foreseen in any way when it comes to action and contacts in an open field because they orient visible or invisible routes that social agents continuously develop and are in fact decided by the interaction between habitus and action itself (Bourdieu, 1984). Hence, when an actor has the necessary capital (whether symbolic,

cultural, or personal) and is confronted with a social occasion in which he or she wishes to participate, action is conceivable. This establishes the connection between contacts and actions, which is what generates social capital. The mobilisation of resources should come first, followed by the formation of relationships and the expectation of receiving something in return. In this way, the interplay of resource, relation, and return should be established through action and contact in order for social capital to be accumulated. The subsequent discussion has come up with the elaboration of the three 'R's of social capital that work together.

The Three 'R's of Social Capital
Resource

To comprehend social capital as a whole, one can first embrace the idea of resource. Social capital can be understood as social resource composed of anything material and symbolic factors that can be used as a medium of exchange (Foa & Foa, 2012; Lin, 2001). In this context, certain personal traits such as age, gender, relationship status, and the presence of heterogeneous and homogeneous relationships, among others (as indicated in Figure 2), might be considered as determinants of social capital. In fact, these are social resources that can be mobilised through actions and contacts. They can ultimately serve as both a source of investment and a conduit for it, both of which can be utilised to reap future benefits. For instance, in a social structure, if young generations offer their dynamism, older generations can contribute their experience as well. If this is plausible, it may raise the question of how closely resources' constituents mirror the defining features of capital. This question has two possible answers. Capital can be understood as the process of investing in order to get a return; nevertheless, any resource that may be employed in an economic activity is considered capital (Lin, 2001). Thus, capital is a remunerative resource or one with an ever-increasing value. The distinction between visible and unseen resources is immaterial; rather, what matters is whether or not those visible and invisible resources have been mobilised or invested in some way. A similar approach to capitalization established the legitimacy of an entire galaxy of capitals: physical, cultural, symbolic, and more (e.g., Bourdieu, 1986). This strategy is based on the assumption that 'investment in social capital' involves mobilising resources for accumulating social capital, whereas 'investment of social capital' involves mobilising collected resources for the purpose of reproducing additional social capital. Based on this framework, social capital may be theoretically assessed alongside other types of capital, and social capital can be considered to be a component of the larger market relations that exist inside the universe of available resources (Maskell, 2000). Social capital as a resource has intrinsic value for its owners that extends beyond any monetary gain. Similarly, it generates additional resources as a result of civic involvement, environmental quality, awareness of local area safety, work-life balance, and the presence of homogeneous and heterogeneous social ties (Fukuyama, 1999).

Since knowledge, skills, and demographic characteristics are intrinsic to individuals, they are viewed as individual resources (Becker, 1993). Indeed, individuals' creative potential and capacities are represented by the elements of social resources that (re)generate social capital (Lin, 2001). Even if the substances of resources that comprise social capital do not necessarily embody all of the characteristics of capital, when combined with other capital (e.g., human capital), they exhibit a lot of factors similar to those of intangible resources represented in Figure 2. From this point of view, it may be plausible to say that social capital does not deplete as a result of usage but rather increases as a result of competent use; nonetheless, social capital does deplete as a result of the absence of action and contacts (Bourdieu, 1986).

Relation

When considering the second 'R' of social capital as the existence of a collection of social relationships between individuals, it is critical to consider the concept of 'social'. The 'social' in its whole is nothing more than a complex web of interconnected relationships between individuals; it is often used interchangeably with 'people' to refer to a concept of structuring human contact in order to facilitate collective action and a mind-set toward reproduction, preservation, and self-organisation (Morrison, 2006; Bourdieu, 1986). Social capital does not appear to be generated in a vacuum on its own without the intervention of entities. Individuals, groups, businesses, and countries are all examples of such entities.

Resources and relationships are intertwined to such an extent that it is often challenging to separate them in their purest form. People engage with their neighbours, friends, family, and acquaintances in mundane or predictable ways; it is critical to understand how these relationships are perceived by people (Granovetter, 1973). The degree to which an individual's social relationships are structured, stable, productive, and of high quality serves as a proxy for their social capital's resourcefulness (Portes, 1998); hence, trust, obligation, norms, and reciprocity come into play (Nahapiet & Ghoshal, 1998; Putnam, 1995).

Figure 2: Three 'R's of social capital (developed by the author based on literature)

Addressing social capital as a relationship, or looking at it from the 'how aspect', implies being aware of individuals' social positions within a group, community, or other sphere, as well as how the positions occupiers might obtain a competitive advantage through the acquisition of additional and diversified resources. Granovetter (1973) uses four indicators to determine the strength of ties: first, the frequency of interaction (the amount of time spent on a relationship); second, the emotional density (strong and deep emotions indicate strong ties and weak emotions indicate weak ties); third, the degree of acquaintance or mutual trust, familiarity (a high degree of trust indicates a strong relationship and a low degree of trust indicates a weak relationship); and fourth, reciprocal exchange (a large number of mutual exchanges makes a strong relationship, and vice versa is a weak relationship). Apart from these, additional indicators include network size, density, homogeneity, heterogeneity, and cohesiveness (Lin, 2001).

Return

The third 'R' of social capital pertains to its functional implications. The functional perspective on social capital proposes that individuals invest resources in relation with the expectation of a return. The return corresponds to an individual's, a group's, or a community's overall well-being (Woolcock & Narayan, 2000; Nahapiet & Ghoshal, 1998). The economic literature places a premium on social capital's function in replicating and implementing resources and relations, as well as its effects on economic growth, life quality, personal capital, human capital, social position, and the overall well-being of an individual, group, and public (Andrews, Jilke, & Walle, 2014; Sharma, 2014; Woolcock & Narayan, 2000).

Investing resources to gain social capital may not always offer a guaranteed return. Individuals are connected by trust and a shared set of norms, which assures that all participants follow the agreed-upon rules, boosting the return on collective action (Putnam, 2000). Individuals' ability to acquire a caring attitude toward others, as well as their ability to establish generalised trust, is enhanced when they are socialised in a trusting environment. Individuals can communicate knowledge that promotes their physical and mental health and well-being when they have mutual understanding and support from others (Hommerich & Tiefenbach, 2018). That is, when resources are mobilised and relationships (trust, norms, and obligations) are established, it is possible to anticipate a return on investment.

Conclusion

This article has attempted to disentangle the various interpretations of social capital found in the literature and proposed an interlinkage framework encompassing the three critical components for defining social capital. Social capital is the totality of resources, relations, and returns that can be mobilised as a result of agents' actions and contacts in an agent-controlled system in accordance with mutually agreed-upon but reinforced rules, obligations, and norms in order to access a range of social potential. Social capital, regardless of its ownership, has implications for both those who produce it and those who use it. While there are apparent distinctions between resources and rewards, what binds them together is the relation. These three components are, as a result, intimately linked not only with one another but also with the actions and contacts that serve as the means by which they are mobilised. If there is a constant relationship between the availability of resources and the growth of returns, they can be deemed capital. Investment of valuable resources results in the formation of social capital, and similarly, the formation of social capital results in the formation of other types of capital. At the micro level, the desire to accumulate social capital is fuelled by an individual's social needs and actions. At this level, not only is social capital amassed in order to achieve worldly objectives, but it is also amassed in order to meet purely spiritual necessities. In a similar vein, social capital can be explained at a macro level as the interaction between members of society and institutions, which reflects society's level of trust in legislative, executive, and judicial institutions. At this level, social capital is considered a public resource as the government invests in its development, which in turn benefits the general public. The greater the level of institutional trust in a society, the greater the opportunities for general development and public well-being.

Given how significant it is that the concept of social capital is constantly evolving and that researchers in this field have continued to study it, it is essential to comprehend the concept of social capital as a whole and to understand what makes it distinctive. Therefore, the insights gained from this article can be applied to the study of social capital in sociology, economics, and related fields, advancing theoretical frontiers. This study, however, has

several limitations. For instance, experts interviewed for the purpose of comprehending relevant literature may be exclusively biased toward a single author and his or her competence, omitting the possibility of integrating other potentially significant literature. Future studies on the application of this integrated three-R model to the assessment of the social capital of specific under-represented populations, such as working students with children, would be enlightening. This study's qualitative nature also poses a limitation, as the author's point of view may not totally correspond with the points of view of others who are interested in merging their points of view in this study's findings. Let future investigations and research resolve these limitations.

References

Andrews, R., Jilke, S., & Walle, S. V. (2014). Economic Strain and Perceptions of Social Cohesion in Europe: Does Institutional Trust Matter? *European Journal of Political Research*, 53(3), 559-579. https://doi.org/10.1111/1475-6765.12052

Ayios, A., Jeurissen, R., Manning, P., & Spence, L. J. (2014). Social Capital: A Review from an Ethics Perspective. *Business Ethics, the Environment and Responsibility*, 23(1), 108-124. https://doi.org/10.1111/beer.12040

Bahadur, G., & Akhtar, Z. (2021). Effect of Teaching with Flipped Class-room Model: A Meta Analysis. *FWU Journal of Social Sciences*, 15(3), 96-112. https://doi.org/10.51709/19951272/Fall-2021/6

Becker, G. S. (1993). *Human Capital: A Theoretical and Empirical Analysis with Special Reference to Education*. Chicago and London: The University of Chicago Press. https://doi.org/10.7208/chicago/9780226041223.001.0001

Bizzi, L. (2013). The Dark Side of Structural Holes: A Multilevel Investigation. *Journal of Management*, 39(6), 1554-1578. https://doi.org/10.1177/0149206312471385

Bourdieu, P. (1984). *Homo Academicus*. California: Stanford University Press.

Bourdieu, P. (1986). The Forms of Capital. In J. Richardson, *Handbook of Theory and Research for the Sociology of Education* (pp. 241-258). New York: Greenwood.

Briggs, X. D. (2007). Social Capital and the Cities: Advice to Change Agents. *National Civic Review*, 86(2), 111-117. https://doi.org/10.1002/ncr.4100860204

Brown, L. D., & Ashman, D. (1996). Participation, Social capital, and Intersectoral Problem Solving: African and Asian cases. *World Development*, 24(9), 1467-1479. https://doi.org/10.1016/0305-750X(96)00053-8

Burt, R. S. (1992). *Structural Holes: The Social Structure of Competition*. Cambridge: Havard University Press. https://doi.org/10.4159/9780674029095

Claridge, T. (2018). *Criticisms of Social Capital Theory and Lessons for Improving Practice*. New Zealand: Social Capital Research.

Coleman, J. S. (1986). Social Theory, Social Research, and a Theory of Action. *American Journal of Sociology*, 91(6), 1309-1335. https://doi.org/10.1086/228423

Coleman, J. S. (1988). Social Capital in the Creation of Human Capital. *American Journal of Sociology*, 94, S95-S120. https://doi.org/10.1086/228943

Coleman, J. S. (1990). *Foundations of Social Theory*. Cambridge: Belknap Press of Harvard University Press.

Foa, E. B., & Foa, U. G. (2012). Handbook of Social Resource Theory: Theoretical Extensions, Empirical Insights, and Social Applications. In K. Törnblom, & A. Kazemi, *Handbook of Social Resource Theory* (pp. 15-32). New York: Springer. https://doi.org/10.1007/978-1-4614-4175-5_2

Fukuyama, F. (1999). Social Capital and Civil Society. Washington, D.C.: *IMF Conference on Second Generation Reforms*.

Fukuyama, F. (2001). Culture and Economic Development: Cultural Concerns. In N. Smelser, & P. Baltes, *International Encyclopedia of the Social and Behavioural Sciences* (pp. 3130-3134). Elsevier. https://doi.org/10.1016/B0-08-043076-7/04584-8

Gabbay, S. M., & Leenders, R. T. (2002). *A Perceptional View of the Coleman Model of Trust*. SOM Research Institute. Groningen: University of Groningen.

Gasparyan, A. Y., Ayvazyan, L., Blackmore, H., & Kitas, G. D. (2011). Writing a Narrative Biomedical Review: Considerations for Authors, Peer reviewers, and Editors. *Rheumatology International*, 31, 1409-1417. https://doi.org/10.1007/s00296-011-1999-3

Granovetter, M. (1973). The Strength of Weak Ties. *American Journal of Sociology*, 78(6), 1360-1380. https://doi.org/10.1086/225469

Granovetter, M. (1985). Economic Action and Social Structure: The Problem of Embeddedness. *American Journal of Sociology*, 91(3), 481-510. https://doi.org/10.1086/228311

Hanifan, L. J. (1916). The Rural School Community Center. *The Annals of the American Academy of Political and Social Science*, 67(1), 130-138. https://doi.org/10.1177/000271621606700118

Hansson, L. (2001). The Role of Social Capital in Estonia Today. In R. Vetik, *Estonian Human Development Report 2001: Is Estonia Socially Sustainable?* (pp. 16-19). Tallinn: Institute of Social Studies, Tallinn University.

Haslam, N. (1994). Categories of Social Relationship. *Cognition*, 53(1), 59-90. https://doi.org/10.1016/0010-0277(94)90077-9

Häuberer, J. (2011). The Resource Perspective - Nan Lin's Concept of Social Capital. In J. Häuberer, *Social Capital Theory* (pp. 117-145). Wiesbaden: VS Verlag für Sozialwissenschaften, Springer Fachmedien Wiesbaden GmbH. https://doi.org/10.1007/978-3-531-92646-9_5

Hommerich, C., & Tiefenbach, T. (2018). Analysing the Relationship Between Social Capital and Subjective Well-Being: The Mediating Role of Social Affiliation. *Journal of Happiness Studies*, 19, 1091-1114. https://doi.org/10.1007/s10902-017-9859-9

Jacobs, J. (1961). *The Death and Life of Great American Cities*. New York: Random House.

Johnson, H. G. (1968). The Economic Approach to Social Questions. *Economica*, 35(137), 1-21. https://doi.org/10.2307/2552159

Kazjulja, M. (2002). How to Get a Good Job: The Role of Social Network in the Estonian labour Market. In E. Saar, *Trepist Alla Ja Üles: Edukad Ja Ebaedukad Postsotsialistlikus Eestis* (pp. 108-125). Tallinn: Teaduste Akadeemia Kirjastus.

Kazjulja, M., & Roosalu, T. (2010). Job Allocation in Transition Society: the Role of Social Networks. *Nasselenie Review*, 1(2), 191-213.

Khan, K. S., Kunz, R., Kleijnen, J., & Antes, G. (2003). Five Steps to Conducting a Systematic Review. *Journal of the Royal Society of Medicine*, 96(3), 118-121. https://doi.org/10.1177/014107680309600304

Lin, N. (2001). *Social Capital: A Theory of Social Structure and Action*. New York: Cambridge University Press. https://doi.org/10.1017/CBO9780511815447

Loury, G. C. (1977). A Dynamic Theory of Racial Income Difference. In P. A. Wallace, & A. M. LaMond, *Women, Minorities, and Employment Discrimination* (pp. 153-188). Heath: Lexington, Mass. [u.a.].

Maskell, P. (2000). Social Capital, Innovation, and Competitiveness. In J. F. Stephen Baron, *Social Capital : Critical Perspectives* (pp. 111-123). Oxford: Oxford University Press.

Moorthy, R., & Naidu, L. (2022). Is War Just and Legal? An Ethical Review of the 'Just War' Theory. *FWU Journal of Social Sciences*, 16(1), 95-106. https://doi.org/10.51709/19951272/Spring2022/6

Morrison, K. (2006). *Marx, Durkheim, Weber: Formations of Modern Social Thought*. London: SAGE Publications Ltd.

Nahapiet, J., & Ghoshal, S. (1998). Social Capital, Intellectual Capital, and the Organisational Advantage. *The Academy of Management Review*, 23(2), 242-266. https://doi.org/10.5465/amr.1998.533225

Portes, A. (1998). Social Capital: Its Origins and Applications in Modern Sociology. *Annual Review of Sociology*, 24, 1-24. https://doi.org/10.1146/annurev.soc.24.1.1

Portes, A., & Landolt, P. (2000). Social Capital: Promise and Pitfalls of Its Role in Development. *Journal of Latin American Studies*, 32(2), 529-547. https://doi.org/10.1017/S0022216X00005836

Portes, A., & Sensenbrenner, J. (1993). Embeddedness and Immigration: Notes on the Social Determinants of Economic Action. *American Journal of Sociology*, 98(6), 1320-1350. https://doi.org/10.1086/230191

Putnam, R. D. (1995). Tuning In, Tuning Out: The Strange Disappearance of Social Capital in America. *Political Science and Politics*, 28(4), 664-683. https://doi.org/10.1017/S1049096500058856

Putnam, R. D. (2000). *Bowling Alone: The Collapse and Revival of American Community*. New York: Simon & Schuster. https://doi.org/10.1145/358916.361990

Schultz, T. W. (1961). Investment in Human Capital. *The American Economic Review*, 51(1), 1-17.

Sharma, D. (2014). Bridging Human Capital and Social Capital Theories. In M. Russ, *Value Creation, Reporting, and Signaling for Human Capital and Human Assets: Building the Foundation for a Multi-Disciplinary, Multi-Level Theory* (pp. 113-140). New York: Palgrave Macmillan. https://doi.org/10.1057/9781137472069_5

Toyon, M. A. (2021). (Re)Formation of Social Capital in Small Region: Exposing the Experiences from Sillamäe. *10th International Conference of Young Folklorists-Lore Makers, Law Breakers: Tradition, Change, and People* (pp. 36-47). Tartu: University of Tartu.

Weber, M. (1978). The Nature of Social Action. In W. G. Runciman, *Max Weber: Selections in Translation* (pp. 7-32). Cambridge: Cambridge University Press. https://doi.org/10.1017/CBO9780511810831.005

Woolcock, M., & Narayan, D. (2000). Social Capital: Implications for Development Theory, Research, and Policy. *The World Bank Research Observer*, 15(2), 225-49. https://doi.org/10.1093/wbro/15.2.225

Sino-Indian Ties and the Future of South Asia:
Geopolitical Implications for Pakistan

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This paper offers insights about the geopolitical perspectives of Pakistan on possible China-India ties in future. It argues that the closeness between Delhi and Beijing may bring healthy and positive effects for Pakistan on six grounds. To start with, the warmth in Indo-China ties is not likely to yield any unfavorable impact on Sino-Pakistan relationship. Secondly, the probable friendly ties between China and India can offer assistance in drawing India and Pakistan closer and avoiding any armed clash. Thirdly, the furtherance of Sino-Indian relations is likely to pave way for peace and stability in Afghanistan since the three are the main stakeholders for regional security in and around Afghanistan. Moreover, it would resultantly open vistas for regional peace. Fifthly, the likelihood of Sino-Indian friendly relations can bring greater economic prosperity and development for the region. Lastly, the probable bond between New Delhi and Beijing can infuse fresh blood into the less effective South Asian Association for Regional Cooperation (SAARC) .

Scholars call the current century the Asian century. Within the Asian continent, South Asia is an important region in global politics on account of its economic stature, natural resources, security issues and a gateway to the major oil producing Middle-Eastern and African sources (Thoker & Singh, 2017). The region has been under the spotlight since late 1940s. The emergence of new states, such as India and Pakistan, and the rise of communist China at the Indo-Pakistan borders brought the attention of the communist and capitalist blocs; and South Asia gradually became a battleground for proxy wars between the two major camps (Gokhale, 2021). The secession of Pakistan and the consequent advent of Bangladesh, the Soviet occupation of Afghanistan, the civil war in Sri Lanka, and power struggle in Afghanistan directly or indirectly kept the region embroiled and at the center of international politics.

The South Asian region stretches from the mountainous Afghan region to the shores of Indian Ocean, from the deserts of India and Pakistan to the valleys of Kashmir, and includes the states of India, Pakistan, Bangladesh, Sri Lanka, Nepal, Bhutan, Maldives, and Afghanistan. "Geo-economically, [it] possesses an abundance of natural resources whose

proper utilisation [sic] could lead to economic well-being of the entire region." (Thoker & Singh, 2017, p. 138). The gradual rise of India as an economic power has highlighted the potential of the region. Moreover, Afghanistan draws attention owing to its untapped resources. From geostrategic perspective, the region has huge importance. Pakistan's military and nuclear capability is another point of attraction. The Soviets have always wanted to come ashore the hot waters through Afghanistan and Pakistan. The immediate neighbor of four South Asian states i.e. Pakistan, India, Bhutan, and Nepal, China has mammoth geostrategic, geo-economic, and geopolitical interests in the region.

The South Asian region, on account of its economic, strategic, and political characteristics, has attracted attention and invited the interest of multiple players and sought involvement of several actors including the big powers e.g. the USA, Russia, and China (Thoker & Singh, 2017). Since the genesis of Cold War, both USA and former USSR aimed to expand their respective ideologies, and South Asia was turned into a battlefield for supremacy and influence between the two camps. The secession of Pakistan, Soviet occupation of Afghanistan may be quoted as the prime instances that exhibit the scale of infiltration. After the dismemberment of USSR and emergence of unipolar world, the USA has been wooing both India and Pakistan to be in its area of influence in order to keep South Asia in its backyard. However, the Sino-Pakistan close ties have forced Washington to come closer to New Delhi (Allauddin et al., 2020). Conversely, Islamabad has been striving to improve its ties with Moscow recently. Scholars have dubbed the efforts at improving the relationship among China, Pakistan, and Russia a new alliance that could change the entire fabric of South Asia (Mohan, 2022; Suryanarayana, 2021; Thoker & Singh, 2017).

Because of Russia's engagement in Europe and recent intervention in Ukraine, there is high likelihood that there would be four main players in the South Asian region: India, Pakistan, China, and the US (Mohan, 2022). The power game in the region suggests that the two pairs i.e. Pakistan and China, and India and USA have to reciprocate (Gokhale, 2021). While Pakistan is showing signs of frustration with the US, India is trying to absorb the Sino-Pakistan bond and has readied to keep its relations with China (Jacob, 2020).

The ground realities for Pakistan and India concerning their reliance on Washington, the preoccupation of the US with the Middle East, Europe, Russia, South Asian anti-capitalist states, and China have demanded the US to diminish its role. In the backdrop of such circumstances, it leaves the current situation in South Asia with three key players: India, Pakistan, and China who make up a strategic triangle with peculiar characteristics of being neighbors, at war, and in possession of nuclear weapons (Allauddin et al., 2020; Freddy, 2020). This complicated, strategic triangular relationship can rediscover the potentials of the region with special role of India and China (Jacob, 2020). Keeping in view the primacy of these three actors in South Asia, the current study aims to find answer to the question "How does Pakistan geo-politically view the probable betterment in Sino-Indian ties in the post-Galwan, post-pandemic, and post-NATO withdrawal from Afghanistan scenario?" This study forwards the argument that the possible warmth in Sino-Indian relations may generate positive geopolitical and geo-economic implications for Pakistan. The likely improved bond may be heartening and healthy for the greater South Asian region including Pakistan.

China's status in South Asia

China, the largest developing state in the world, has displayed its capability, resilience, and ultimately strength during the Covid-19 period highlighting its improved health infrastructure, resilient economy, poverty-alleviation capacity, international trade, global engagement, and technological advancement (Xuetong, 2021). Throughout the globe, China's rise is viewed differently. It applies equally to South Asia where Beijing's economic growth is positively perceived by Pakistan, Sri Lanka, and Bangladesh, while the same is frowned upon by India (Jacob, 2020). China has established lasting ties with South Asian states by engaging them in bilateral, trilateral, and multilateral arrangements in economic and security spheres.

China intends to make its mark in South Asia as a stakeholder without fundamentally altering the contours of regional security. Both India and China have been endeavoring to grasp South Asia in their area of influence (Allauddin et al., 2020). Conversely, China has close ties with Pakistan, the biggest adversary of India. China's relationship with Pakistan is based on long-term geopolitical and security vision (Jacob, 2018). This triangular prelateship has confounded the South Asian politico-economic and security spheres.

India's stature in South Asia

Within the South Asian region or the Indian Ocean, there cannot be two views that India occupies the status of an "elephant" economically, politically, and militarily (Gill, 2020). Its territorial size and population makes it the leading South Asian state (Shafiq et al., 2019). In its neighborhood, New Delhi shares distrust with both Pakistan and China (Suryanarayana, 2021). India's claims for grandeur and acclaim are opposed by Pakistan. Being the immediate neighbor and adversary of Pakistan, the elevation of India, founded on her population, territory, military might, economic rise, and geopolitical position, have always sent shockwaves to the policy elites in Pakistan (Freddy, 2020). Resultantly, both India and Pakistan have almost invariably seen each other as overt adversaries, and their ties have been perpetually tense (Suryanarayana, 2021).

For counterbalancing the Sino-Pakistan entente cordiale, India has sided with the Soviets or the Americans (Rather, 2019). India's nuclear deal with the US in 2008 strengthened the former's position politically but simultaneously, it also severed her ties with Beijing. To stamp its aspirations for regional hegemony, India has, besides Pakistan, territorial issues with multiple countries. India has come into several armed conflicts with China in 1962, 2017, and 2020 (Karackattu, 2020) armed clash with Sri Lanka in 1987, 1990 and intervention in Sri Lankan civil war (Awad & Todkar, 2020); armed clash with Bangladesh in 2001 (Rana, 2018) and with Myanmar in 2015 (Das, 2018). India has displayed its stature and strength by successfully blocking Beijing's entry into SAARC against the aspirations of other member states (Yang, 2021). India considers the rise of China as a point of worry (Xuetong, 2019), and likewise, New Delhi's ambitions for South Asian hegemony are halted by the growing influence of Beijing (Ali, 2022). Resultantly, the Indian foreign policy objectives and means have been compelled to cater China.

Pakistan's position in South Asia

Pakistan is considered as a state with a significant military power (Allauddin et al., 2020) along with its geostrategic position, which attracts the attention of big powers. Pakistan is one of the key component of the South Asian security triangle (Jacob, 2020) where her biggest security concern comes from India (Allauddin et al., 2020). Both have fought multiple wars, engaged in several standoffs, and are on the course to armed clash. Scholars have called India factor as the foundational ground for the Sino-Pakistan ties (Suryanarayana, 2021). For

Pakistan, establishment of cordial ties with China was a rational choice due to the Beijing's unsettled territorial dispute with New Delhi carrying an implicit indication to 'enemy of my enemy is my friend' notion (Tkacik, 2011).

The security triangle involving South Asia also carries the feature of Sino-Pak bond. Beijing and Islamabad share decades-long, most stable, and rare relationship defying the common wisdom and the dictates of politics rhetorically dubbed as all-weather friendship (Gul et al., 2021). Jacob (2018) argues that the Beijing-Islamabad bond is founded on the long-term vision of geopolitical and military underpinnings. Conversely, the Sino-Pak ties have also been criticized for their fair-weather friendship outlook (Ranjan, 2021; Tkacik, 2011). According to Kuszewska and Nitza-Makowska (2021), Pakistan serves as a cherished tool for expanding Beijing's influence in South Asia. Some scholars believe that the foundation for China to forge strong ties with Pakistan has been to contain India (Gill, 2020; Ranjan, 2021). Pant (2012) calls Pakistan a "thorn" in the passage of smooth Sino-Indian ties.

Sino-India ties

The dawn of the new century has tendered opportunities and offered new roles for both China and India. Scholarship attentive to South Asian security upholds that there exists both divergence and convergence of interests between Beijing and New Delhi on their respective roles in South Asia and Indian Ocean region (Gill, 2020; Gokhale, 2021; Ranjan, 2021; Suryanarayana, 2021). Some analysts believe that a marked change in near future is unlikely (Khokhar, 2020). Others believe that the probable ties should regard that their territorial issue might remain intact for a long time; and that their military competition would affect other South Asian countries (Pardesi, 2021). Gokhale (2021) argues that the ties in future may opt one of the four possible courses i.e. military clash, armed coexistence, positive competition, or cooperation. Roy-Chaudhury (2018) suggests a pattern of competition and cooperation between the two key actors in South Asia. The competition of the titans for supremacy in and around South Asia involves multiple regional and international actors including USA, Russia, Iran and other South Asian states suggesting a road to divergence (Gill, 2020; Pardesi, 2021).

The probable negative competition is likely to squeeze the probability of improved ties between China and India (Allauddin et al., 2020). In the view of Roy-Chaudhury (2018), the primary factor embroiling the two leviathans is likely to remain focused on territorial dispute that may trigger armed clash. From the 1962 border war to the 2017 Dokhlam standoff and the recent Galwan Valley clash ending in the death of dozens of soldiers provides a glimpse of the possible clash between the two giants displaying clear signs of rigorous, constant competition (Bloomfield, 2021).

Another possible negative likelihood may involve armed coexistence (Gokhale, 2021). This also relates to the portrayed or perceived rivalry that acts as the biggest challenge to the direction of sustainable Indo-China ties (Garver, 2020). Gokhale (2021) maintains that both states have encountered the mistrust of the other based on the misperception about each other's rise. India considers China containing its growth through three-pronged strategy i.e. "trade and investment,…soft power diplomacy,…and development of strategic ports" (Gill, 2020, p. 5). China contemplates India with the same intensity of following and abetting strategies that ensue China containment policy (Pardesi, 2021). Gill (2020) specifically accuses Beijing of containing India's rise. New Delhi is dubious about the rise of Chinese influence in

South Asia. It is also unwilling to eschew its status as a dominant South Asian power (Grossman, 2020; Pant, 2016). India perceives each move of China cautiously and suspiciously exhibiting utmost mistrust (Allauddin et al., 2020). Alternatively, Beijing recognizes the lack of trust towards India based on the premise that New Delhi acts as a partner in the encirclement of China policy in the South Asian region directed by capitalist big powers (Gokhale, 2021; Thoker & Singh, 2017). This perception may be substantiated by India's opposition to CPEC, development of Chabahar Port, development of ties with the USA, Japan, and Australia (Ali, 2022).

The third alternate scenario in the passage of Indo-China rapprochement is the growing Chinese geo-economic influence in the region through Belt and Road Initiative (BRI) and particularly China-Pakistan Economic Corridor (CPEC) (Roy-Chaudhury, 2018). The geopolitical vision to access the Indian Ocean region along with economic logic is the principal driver of Chinese policy for the initiation of CPEC (Gill, 2020). In order to counter CPEC and developmwent of Gwadar Port in Pakistan through Chinese assistance, India supported the development of Chabahar Port in Iran (Singh & Singh, 2019). Moreover, the rising foothold of China involving superiority in the Indian Ocean is another possible impediment (Roy-Chaudhury, 2018). Beijing' efforts aimed at dominating Indian Ocean have been received by New Delhi with huge suspicion (Bloomfield, 2021). India looks upon herself as the protector and key stakeholder in the Indian Ocean (Gill, 2020). The String of Pearls notion as forwarded by the US suggests the efforts aimed at widening the scope to carve out a safe geostrategic and geo-economic communication channel (Bloomfield, 2021) "in the Indian Ocean, which stretches from mainland China to Sudan" (Thoker & Singh, 2017, p. 134).

On the other hand, apart from the border issues, competition for influence, divergent foreign policy objectives and the incidents on the border, some scholars are still hopeful about prospects of cooperation between the two neighboring states (Roy-Chaudhury, 2018), which may be witnessed in BRICS, Asian Infrastructure Investment Bank (AIIB), Bangladesh–China–India–Myanmar Forum and so forth. Scholars had predicted improvement in ties in a steady, positive direction before the resurgence of military show off on border (Thoker & Singh, 2017). However, the current scholarship still argues in favor of ties based on convergence of interests and cooperation (Suryanarayana, 2021). The geo-political feature of the Indo-China ties is expected to lead the geo-economic aspect of the ties (Roy-Chaudhury, 2018). New Delhi also appears to go past the Pak-China ties and looks ahead to improve ties with Beijing (Jacob, 2020).

Keeping in view the above discussion, the current study argues that the improved Beijing-New Delhi ties may render the Sino-Pakistan ties unaffected, exert a healthy impact on Indo-Pak relations; support peace and stability in Afghanistan, prove to be instrumental in uplifting regional peace, prosperity, and cooperation, can serve to rejuvenate the less effective SAARC.

Sino-Pakistan relations to remain unaffected
A careful observation at the circumstances around the South Asian security triangle suggests that any possible strengthening of the ties between Beijing and Delhi is not likely to affect existing relations between Beijing and Islamabad. China and India are two most populous states globally. Both are Asian superpowers who want to extend their influence through "a mix of soft and hard power" modes (Roy-Chaudhury, 2018, p. 100). Both are the

bordering states to Pakistan where China is considered all-weather friend while India is dubbed as the most pressing security threat (Freddy, 2020). The possible normalization and strengthening of ties between Beijing and New Delhi are not likely to affect the Sino-Pakistan ties on account of two reasons. First, keeping in view the decades old close Sino-Pakistan ties and growing high Chinese stakes in Pakistan in the shape of military and economic cooperation, especially after the establishment of CPEC, the possible Sino-Indian cordial ties are not likely to alter the course of Pak-China ties (Gill, 2020). CPEC suggests a marked shift from Beijing's politico-security driven and elite-centred bilateral relations to realistic and economically-oriented ties (Jacob, 2018). It has been dubbed as a game-changer that has been capable to address the genuine domestic issues of Pakistan and has helped Pakistan exploit its rich geostrategic and geo-economic resources especially (Hussain et al., 2021).

Moreover, the anticipated strengthening between the two competitors should be founded on the principle of no-strings attached policy where none should ask the other to withdraw support and retain ties with any other actor/partner. China is unlikely to bargain the long-standing politico-economic and security ties with Pakistan and eschew its status of an old trusted friend (Gul et al., 2021). In the likely event of Indo-Chinese entente, Pakistan will be confident of its "strategic partnership with China… with little concerns that the Sino-Indian economic relationship would cause China to re-evaluate its support on Pakistan's core concerns vis-à-vis India" (Khokhar, 2020, p. 2).

Healthy Impact on Indo-Pak ties
There are three main physical actors in South Asian region: China, India, and Pakistan (Jacob, 2015). The Indo-Pak conflict on Kashmir has generated fear of the larger neighbor and consequently created what may be dubbed as India factor in the foreign and security policies of Pakistan (Allauddin et al., 2020). This study maintains that the likely furtherance of Indo-China ties may improve Indo-Pak relations, and at a minimum help them avoid further deterioration in relations.

The deepening of ties between Beijing and New Delhi may divert the attention of both India and Pakistan from any possible aggressive moves. "Pakistan hopes that the importance of China's economic relationship with India may help Beijing play the role of a moderator on New Delhi's belligerent behavior vis-à-vis Islamabad" (Khokhar, 2020, p. 10). A recent study has also concluded that the likelihood of the success expands after the mediation of a third-party (Malik, 2019). Beijing is highly likely to continue extending its due assistance to Pakistan. On the other hand, under the proposed circumstances, India would probably avoid giving "disproportionate attention to Pakistan, attempting to shame and isolate [the latter] rather than engaging in a sustained and high-level politico-strategic engagement with China to normalize [sic] the strategic triangle" (Jacob, 2015, p. 95). Positive approach and emphasis on healthy aspects at domestic and regional levels could be instrumental in minimalizing adverse effects on disproportionately long and unsettled Kashmir issue.

Peace and stability in Afghanistan
The three key actors i.e. China, India, and Pakistan have been striving for greater amount of influence in Afghanistan under the Taliban government. The possible contribution of the probable rejuvenated Sino-India ties may face a number of challenges vis-à-vis peace and stability in Afghanistan. Scholars have pointed towards India's engagement with China on multiple bilateral matters, however, New Delhi has not succeeded in joining efforts with Beijing and other neighboring states in addressing the rampant global and regional issues of

terrorism, stability in Afghanistan, and IS threat (Jacob, 2015). Some scholars believe that Beijing follows plans to oust India from Afghanistan with the support of Pakistan (Ali, 2022), which is possible due to Pakistan's geostrategic position as central vis-à-vis Afghanistan (Akhtar & Sarkar, 2015). China was "…increasingly engaged in regional conflict management initiatives, mediating between Kabul and the Taliban, and organising (sic) trilateral strategic engagements with Afghanistan and Pakistan" (Jacob, 2015, p. 96). However, under the new Taliban government starting in 2021, India may not be able to wield similar influence as it had during the government of Ashraf Ghani. China may also have witnessed the diminishing of its influence while Pakistan may experience change in its influence in the post-NATO Afghanistan (Jacob, 2020). The biggest concern for the three i.e. China, India, and Pakistan on their parts vis-à-vis Afghanistan would be the elimination of any pedestal working against their countries (Ali, 2022). The power struggle among the three for broadening their area of influence on Afghan soil may produce negative outcomes. If one actor aims for a specific means to achieve certain ends, the other actor(s) might launch countermeasures to discredit the former of any likely positive outcome (Rather, 2019) thereby dragging Afghanistan and resultantly the entire region into a battleground for proxy wars.

With this background, this study endeavors to streamline that apart from the role of outsider actors, the probable normalization in Sino-Indian ties may yield the positive impact on peace and stability in Afghanistan. China, India, and Pakistan, with their role as regional players, are supposed to act together in order to bring about stable and symbiotic bond, and regional peace (Jahangir & Anis, 2016). The wrenched, violent past and continual change of governments in Afghanistan have demanded the positive role of other regional actors. That role may involve non-interference, financial assistance in infrastructure development, engagement of Afghan leaders in mainstream global and regional politics, and support in training and education. Resultantly, the optimists believe that the regional scenario surrounding Afghanistan may change with the involvement of Afghanistan's immediate neighbors such as China, India, and Pakistan (Ali, 2020; Mukherjee, 2018; Suryanarayana, 2021).

Under the likely scenario of betterment of Indo-China ties, the stability in Afghanistan may receive unprecedented attention. The divergent attempts for influence in Afghanistan by China, India, and Pakistan, and their consequent effects on Afghan politics and peace may likely receive a fresh positive turn, extricate the probable adverse impact, and produce positive results. Under the patronage and leading role of China, Pakistan would likely join the trilateral/quadrilateral group with India being a member. By this way, China, with its improved ties with India along with the approval of Pakistan, can "consider the region as a security complex (i.e. acknowledging that the security of each state cannot be considered separately from that of the others), and manage its relations with India in a cooperative manner" (Jacob, 2015) for stability and peace in Afghanistan.

Regional peace
This study submits the argument in light of the dictates of interdependence theory that suggests "reciprocal effects among countries" (Keohane & Nye Jr, 2011, p. 7) that the probable warmth in Sino-Indian ties can bring peace and prosperity in the South Asian region in particular and Asia in general. The improved Sino-Indian ties can yield peaceful environment for the entire South Asian region (Jahangir & Anis, 2016). Through the renewed and strong ties, the region would resolve its tardy and most pressing issue of terrorism. The Indo-Chinese relations are likely to be instrumental in combating terrorism, a menace that has appallingly

challenged security environment of South Asia (Jahangir & Anis, 2016). The dream of "peaceful coexistence with India and Pakistan along with other South Asian countries (would be realized) so that an integrative security mechanism could be developed to safeguard its peripheries, adjacent to South Asia from terrorist activities" (Jahangir & Anis, 2016, p. 12).

The improved security circumstances around South Asia could be hugely capable to enhance prosperity with large sums of amounts to be transferred to development and public spending instead of security expenditures. In the backdrop of this, the Pakistani concerns and interests may be appropriately adjusted where China can act as a moderator in the South-Asian security triangle to maintain peace between India and Pakistan. The possible reinvigoration in the Sino-India ties might serve a practical and plausible template for regional cooperation on peace and joint efforts in the direction of terrorism-free world.

Regional development and prosperity
In the current international system, states are interdependent and reciprocal (Keohane & Nye Jr, 2011) and they can "can collectively prosper if they go ahead hands in hands for cooperation and coordination" (Allauddin et al., 2020, p. 86). This paper also argues that the feasible betterment of Sino-Indian ties may potentially bring the prospects of development and prosperity in the South Asian region especially and Asia on the whole. The Sino-Indian improved ties may potentially serve in the direction of "expanding economic cooperation and integration mechanism" (Jahangir & Anis, 2016, p. 12). The future ties between New Delhi and Beijing founded on "non-confrontational and cooperative" basis can yield benefits for the entire region (Suryanarayana, 2021, p. 21). By virtue of BRI, with the betterment of ties with Indo-China relations, the regional and supra-regional scenario might undergo swift and fruitful transformation. New Delhi may have to look beyond the petty issues and Beijing would have to address the economic needs of the region before moving towards global direction (Jacob, 2015). India and China can contribute towards several areas in and around region for instance, trade and commerce, investment, security of sea-line communication, safe navigation, fishing, terrorism and so forth (Gill, 2020). China would continue on the course to retain its second largest economy status and it is on the committed path for multilateral arrangements through Shanghai Cooperation Organization, BRI, and BRICS (Kuszewska & Nitza-Makowska, 2021). The stature of both China and India is likely to benefit the entire region as their joint GDP per capita income in 2021 was 24522, China 17189 and India 7333 (Bank, 2022). As far as FDI is concerned, recent trends are alarming globally, however, Asia is the exceptional case having received a significant amount of world' invest inflow which is recorded about 39%. According to the UNCTAD (2019) report, South Asia received an increased amount of FDI inflow (3.5%) and outflow decline to 2.5%. India, China and Pakistan are among the top countries of the region where FDI inflow increased. Sethi et al. (2020) have also pointed out this growth maintaining that FDI to South Asia which, was recorded about 28.004 billion USD during the fiscal years of 1990-1999 was increased to 214.13 billion USD during 2000-2009; and despite the political instability, terrorism and border skirmishes between South Asian countries, the FDI increased to 303.73 billion USD during the years 2010-18.

Rejuvenation of SAARC
SAARC, among the regional organizations, has been a dismal entity (Naazer, 2018; Thoker & Singh, 2017). Scholars have highlighted towards several pitfalls responsible for the disappointing outcomes during its 37-year life. One of the key hurdles in the passage of SAARC for its mandated role is the tug of war between India and Pakistan (Bishwakarma & Hu, 2022; Yang, 2021). The scholarship maintains that there are possible remedies for the

transformation of SAARC into a potent regional organization catering to the political, economic, and strategic demands of the region. One of the vital solutions is the grant of full membership status to China, which Beijing has been striving for years, disapproved by India and recommended by Pakistan (Thoker & Singh, 2017).

This study also argues that under the assumption of improved Sino-Indian ties, the non-inclusion of China in SAARC on account of the Indian opposition can be transformed into rejuvenation via the inclusion of Beijing in it (Bishwakarma & Hu, 2022). This addition, under the banner of the probable better Beijing-New Delhi ties, is likely to yield positive results for peaceful and prosperous South Asia. For this, "all three players will have to work jointly for the stable mutually beneficial relationship and the regional development… [where] Pakistan adheres the fact that smooth Sino-India relations are a great source of peace and tranquility in the region" (Jahangir & Anis, 2016, p. 7). Economically, China's entry into SAARC is likely to bring about exceptional development in trade, infrastructure, and investment (Bishwakarma & Hu, 2022). This likely change is expected to transform the entire South Asian fabric (Thoker & Singh, 2017). The transformation of SAARC from a dormant to a lively organization can also contribute towards Sustainable Development Goals especially education, poverty, clean water, and environmental sustainability.

Conclusion

A Carnegie Endowment for International Peace report has suggested that the future Indo-China ties may opt one of the four possible courses i.e. military clash, armed coexistence, positive competition, or cooperation (Gokhale, 2021). This study strived to submit the scenario streamlining the latter two courses suggesting improved ties between Beijing and New Delhi and present the likely view of Pakistan on that probable situation. The peaceful coexistence, albeit with a number of downs, between China and India may continue to exist. In the event of improved ties between Beijing and New Delhi, Pakistan would likely to foresee six potential possibilities. The growth in Sino-Indian entente is highly unlikely to affect the existing strength and frequency of Sino-Pakistan ties. This study argues that the betterment of ties, would rather improve existing Indo-Pak relations. The warmth in China-India relationship is likely to bring peace in Afghanistan specifically and may serve as a source of peaceful, prosperous and terrorism-free South Asian region. The furtherance in the proposed ties is highly likely to rejuvenate the dead organization of SAARC with the inclusion of China in it. Moreover, fundamental regional problems of poverty and unemployment may get a fresh attention. With reduced mistrust between Beijing and New Delhi, increased interdependence, and the consequent diminishing role of outside actors China's rise may be fully exploited by all the South Asian states with a likely impact on their trade, infrastructure, and investment. Moreover, China, along with India and Pakistan, can handle the rampant environmental deterioration in the region.

In contrast, some analysts believe that a marked change in near future is unlikely (Khokhar, 2020). While others argue that the future Sino-Indian ties may take extreme diverging course of military clash, armed coexistence (Gokhale, 2021). New Delhi might opt for containment strategy against Beijing for curtailing latter's growing influence in South Asia (Gill, 2020). In that case, the role of the US may also drastically affect the future course of China-India relations (Allauddin et al., 2020). Border dispute between India and China would continue to nag any positive gestures turning the ties into a rigorous, negative, and constant competition (Bloomfield, 2021).

References

Akhtar, R., & Sarkar, J. (2015). Pakistan, India, and China after the US Drawdown from Afghanistan.https://www.stimson.org/sites/default/.../pakistan-india-china-after-us afghanistan.pdf

Ali, G. (2020). China–Pakistan cooperation on Afghanistan: assessing key interests and implementing strategies. *The Pacific Review*, 1-23. https://doi.org/https:// doi.org/10.1080/09512748.2020.1845228

Ali, G. (2022). China–Pakistan cooperation on Afghanistan: assessing key interests and implementing strategies. *The Pacific Review*, *35*(3), 506-528.

Allauddin, Liu, H., & Ahmed, R. Q. (2020). The Changing Dynamics and New Developments of China–Pakistan Relations. *India Quarterly*, *76*(1), 73-88. https://doi.org/https://doi.org/10.1177/0974928419901195

Awad, R. S., & Todkar, B. (2020). Disputes in India-Sri Lanka relations. *Asian Journal of Research in Social Sciences and Humanities*, *10*(11), 25-32. https://doi.org/https://doi.org/10.5958/2249-7315.2020.00025.8

Bank, W. (2022). *International Comparison Program*. https://www.worldbank.org/en/country/china

Bishwakarma, J. K., & Hu, Z. (2022). Problems and prospects for the South Asian Association for Regional Cooperation (SAARC). *Politics & Policy*. https://doi.org/https://doi.org/10.1111/polp.12443

Bloomfield, A. (2021). The India–China bilateral relationship: a 'serious and enduring rivalry'. *Journal of the Indian Ocean Region*, *17*(1), 5-23. https://doi.org/https://doi.org/10.1080/19480881.2021.1878580

Das, P. (2018). Security challenges and the management of the India–Myanmar border. *Strategic Analysis*, *42*(6), 578-594. https://doi.org/https://doi.org/10.1080/09700161.2018.1557932

Freddy, H. J. (2020). China, India & Pakistan strategic triangle – the Pakistan factor in Sino-Indian relations. *Global Affairs*, *6*(4-5), 559-575. https://doi.org/https://doi.org/10.1080/23340460.2020.1871300

Garver, J. W. (2020). The China–India Rivalry in the Globalization Era. *South Asia: Journal of South Asian Studies*, *43*(3), 578-580. https://doi.org/10.1080/00856401.2020.1755785

Gill, D. M. (2020). Between the Elephant and the Dragon: examining the Sino-Indian competition in the Indian Ocean. *Journal of the Indian Ocean Region*, 1-20. https://doi.org/https://doi.org/10.1080/19480881.2020.1824393

Gokhale, V. (2021). *The Road from Galwan: The Future of India-China Relations*. https://carnegieendowment.org/files/Gokhale_Galwan.pdf

Grossman, D. (2020). *What China Wants in South Asia*. Retrieved June 22 from https://www.orfonline.org/research/what-china-wants-in-south-asia-67665/

Gul, A., Munir, M., Shafiq, M., & Imran, S. (2021). Contours of China-Pakistan strategic cooperation: Implications for India and its counter-strategies. *Journal of Public Affairs*, e2599. https://doi.org/ https://doi.org/10.1002/pa.2599

Hussain, S., Khan, F., & Ayaz, M. (2021). Politico-Economic Implications of CPEC on Pakistan. *FWU Journal of Social Sciences*, *15*(4), 147-162.

Jacob, H. (2015). *China, India, Pakistan and a stable regional order* (What does India think, Issue. https://ecfr.eu/publication/what_does_india_think5000/

Jacob, H. (2020). *China, India, Pakistan and a stable regional order*. https://ecfr.eu/special/what_does_india_think//analysis/china_india_pakistan_and_a_stable_regional_order

Jacob, J. T. (2018). The China–Pakistan Economic Corridor and the China–India–Pakistan Triangle. In J.-M. F. Blanchard (Ed.), *China's Maritime Silk Road initiative and South Asia* (pp. 105-136). Springer.

Jahangir, A., & Anis, R. (2016). developments in Sino-Indian relations: implications for south Asia and Pakistan. *Journal of South Asian Studies*, *4*(1), 07-18. https://doi.org/www.https://esciencepress.net/journals/index.php/JSAS/article/view/1488

Karackattu, J. T. (2020). The Corrosive Compromise of the Sino-Indian Border Management Framework: From Doklam to Galwan. *Asian Affairs*, *51*(3), 590-604. https://doi.org/https://doi.org/10.1080/03068374.2020.1804726

Keohane, R. O., & Nye Jr, J. S. (2011). *Power and interdependence* (4th ed.). Longman.

Khokhar, R. (2020). *An Insight into Pakistan's View on Sino-Indian Relations*. Stimson Center. Retrieved July 01 from https://southasianvoices.org/an-insight-into-pakistans-view-on-sino-indian-relations/

Kuszewska, A., & Nitza-Makowska, A. (2021). Multifaceted Aspects of Economic Corridors in the Context of Regional Security: The China–Pakistan Economic Corridor as a Stabilising and Destabilising Factor. *Journal of Asian Security and International Affairs*, *8*(2), 218-248. https://doi.org/https://doi.org/10.1177/23477970211017719

Malik, M. S. (2019). Pakistan-India Relations. *Strategic Studies*, *39*(1), 59-76. https://www.jstor.org/stable/48544288

Mohan, C. R. (2022). Imran Khan Goes to Moscow as Pakistan Romances Russia. *Foreign Policy (FP)*. https://foreignpolicy.com/2022/02/23/imran-khan-pakistan-russia-putin-india-geopolitics/

Mukherjee, K. (2018). Assessing security relations in the Asia Pacific: the cases of China, India and Pakistan. *Canadian Foreign Policy Journal*, *24*(1), 56-73. https://doi.org/https://doi.org/10.1080/11926422.2017.1331174

Naazer, M. A. (2018). SAARC Summit Diplomacy and Its Impact on Indo-Pakistan Relations (1985–2014). *FWU Journal of Social Sciences*, *12*(1), 67-75.

Pant, H. V. (2012). The Pakistan Thorn in China–India–US Relations. *The Washington Quarterly*, *35*(1), 83-95. https://doi.org/https://doi.org/10.1080/0163660X.2012.642294

Pant, H. V. (2016). Rising China in India's vicinity: a rivalry takes shape in Asia. *Cambridge Review of International Affairs*, *29*(2), 364-381. https://doi.org/https://doi.org/10.1080/09557571.2012.734781

Pardesi, M. S. (2021). Explaining the asymmetry in the Sino-Indian Strategic Rivalry. *Australian Journal of International Affairs*, *75*(3), 341-365. https://doi.org/https://doi.org/10.1080/10357718.2021.1893267

Rana, M. S. (2018). Transformation of Indo-Bangladesh relations: From insecurity to cooperation in Northeast India. *Strategic Analysis*, *42*(6), 559-577. https://doi.org/https://doi.org/10.1080/09700161.2018.1559976

Ranjan, A. (2021). China's engagement with Pakistan: concerns for India. *Journal of the Indian Ocean Region*, *17*(1), 96-113. https://doi.org/https://doi.org/10.1080/19480881.2021.1878585

Rather, M. A. (2019). China's Role In The India–Pakistan Conflict. *World Affairs: The Journal of International Issues*, *23*(1), 38-47. https://www.jstor.org/stable/48531206

Roy-Chaudhury, R. (2018). India's perspective towards China in their shared South Asian neighbourhood: Cooperation versus competition. *Contemporary Politics*, *24*(1), 98-112. https://doi.org/https://doi.org/10.1080/13569775.2017.1408173

Sethi, N., Das, A., Sahoo, M., Mohanty, S., & Bhujabal, P. (2020). Foreign direct investment, financial development and economic prosperity in major south Asian economies. . *South Asian Journal of Business Studies*, *11*(1), 82-103. https://doi.org/https://doi.org/10.1108/SAJBS-12-2019-0225

Shafiq, M., Sultana, R., Munir, M., & Shoaib, M. (2019). Pakistan's Dilemma of Kashmir Policy, Trouble Spots: The Post 2016 Perceptions and World Response. *FWU Journal of Social Sciences*, *13*(1), 1-13.

Singh, S., & Singh, B. (2019). Geopolitics of ports: Factoring Iran in India's counterbalancing strategy for "Sino-Pak Axis". *Journal of Eurasian Studies*, *10*(2), 169-182. https://doi.org/https://doi.org/10.1177/1879366519850712

Suryanarayana, P. S. (2021). *The Elusive Tipping Point: China–India Ties for a New Order*. World Scientific.

Thoker, P. A., & Singh, B. (2017). Sino-Pakistan friendship, changing South Asian geopolitics and India's post-Obama options. *South Asia Research*, *37*(2), 133-146. https://doi.org/https://doi.org/10.1177/0262728017700184

Tkacik, J. J. (2011). *The Enemy of Hegemony is My Friend: Pakistan's de facto 'Alliance'with China - Testimony before USA Senate Foreign Affairs Oversight and Investigations Subcommittee, hearing on Reassessing American Grand Strategy in South Asia*. https://defence.pk/pdf/threads/the-enemy-of-hegemony-is-my-friend-de-facto-sinopak-alliance.261199/

UNCTAD. (2019). *World Investment Report 2019: Special Economic Zones*.

Xuetong, Y. (2019). *Inertia of History: China and the World by 2023*. Cambridge Scholars Publishing.

Xuetong, Y. (2021). Becoming Strong: The New Chinese Foreign Policy. *Foreign affairs*, *100*, 40.https://heinonline.org/HOL/LandingPage?handle=hein.journals/fora100&div=98&id=&pag

Yang, S. (2021). China-SAARC Regionalism: Construction and Challenges. In *China's International Relations* (pp. 187-206). Springer.

Psychosocial Causes of Beggary: Modes and Effects of Beggary

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The present research aimed to explore the psychosocial reasons of beggary in relation to examine modes of beggars' behaviour, and effect of beggary, using Interpretative Phenomenological Analysis (IPA). The research design was Exploratory. Total sample size is 15 beggars including 7 men and 8 women. A self-constructed open ended questionnaire investigating about the psychosocial reasons, effects of beggary and modes of begging behavior was employed for data collection. The findings showed that unemployment, poverty, and lacks of professional skills were reported as major social causes. Further physical disability, old age and some serious and chronic diseases were reported as major biological causes of beggary. Psychological causes of beggary included lack of self-respect, feelings of worthless, and feelings of insecurity about their future. Beggars frequently reported to experience low self-esteem, guilt, shame, dissatisfaction, being insulted, sadness, feelings of loneliness, helplessness and inferiority. Majority of the participants reported begging in group from, showing their illness and handicapedness, as religious assists, selling cheap goods, as modes of begging. Peoples, positive attitude towards beggars mostly included sympathy, kindness, support and negative included hatred, disregard, and verbal abuses. The solutions suggested to end beggary are included governmental measures to eradicate poverty and taking care of unattended older parents who take beggary to support them.

Keywords: beggary, psychosocial causes, modes of begging, poverty, unemployment, feelings of worthless .

Begging is not a local kind a problem instead it's a global issue which has become big concern in low income societies (Ali, 2019). The rise in the population of beggars in Pakistan brings to question whether this phenomenon has become a potential threat to its society and the idea of self-sufficiency in the nation (Enam, 2021). Begging is a way of asking for money, food, clothes from other individuals without any thing to do in return. Begging comprises solicitation of a gift, generally a small amount of money, by someone for the personal use of the beggar as there is no other source of income for him\her or the other sources of income are insufficient to fulfill the basic necessities of beggars and the beggars' dependents (Bryson, 2004). It is usually associated with homelessness, unemployment, refugees, etc. (Asrese, Tilahun, & Mekonnen, 2014). At times, begging is associated with crime, guideline of public/quasi-public spaces as

well as a cause of national shame - being more of a profession instead of a need; therefore, it needs to be dealt with urgently for national face saving (Jelili, 2006).

Usually, people adopt begging because of poverty, broken homes, being diseased, physical handicap or un-guided childhoods (Sobhani, 2008). Generally beggars are found at rubbish dumps, road sides, traffic signals and under flyovers. In the present age, it has become a growing phenomenon in Pakistani society as is considered to be an easy way of obtaining financial assistance. It is difficult to find the exact cause or dependent factors of beggary though poverty, lack of education, social changes or degeneration are some of the common reasons as to why individuals pursue begging (Khan, 2013). Above all, beggary has existed in every period of history, usually in an organized way. Several measures have been taken to solve the problem of beggary and its effects such as to organize families and label it as a crime so that beggars try to refrain from this profession (Sobhani, 2008; Najafi, Abrandabadi, Hossein, Zadeh, Jafar, Babaji, & Ali, 2004).

Although it is considered a deviant behavior by an individual to ask money, clothes, food or other basic necessities but it's a normal thing for a child to ask anything from his\her parents (Onoyase, 2010). Labeling theory provide us knowledge about that deviance behavior (Becker, 1963). This theory states that behavior itself does not determines deviance but it depends on others response about that act. Asking people for any financial support is basically a normal behavior but because of labialization by a society or culture it becomes a unexpected behavior (Adugna, 2006).

The theoretical framework current research is based on Lewis' (1998) theory of the culture of poverty. This theory of the culture of poverty explored that actually poverty passes from parents to their children and it's become a tradition of that family to face poverty; consequently, some features prepare the foundation for the phenomenon of begging (Lewis, 1998). Some of these features are: low level of relations; refraining in public activities; lack of deliberate connections with people; having some terminal or chronic disease and sometimes even malingering; moreover lack of skills to doing work; and facing unemployment for long time (Mansour, 2017); some religious and psychological features such as poor of self-concept; low self-esteem; weak self-concept; habit of idleness, lack of cognitive ability; dependence on others; feeling of helplessness; and the feeling of worthlessness (Khan, 2013; Ahmadi, 2003).

It has been thought that most of the religions encourage the profession of beggary especially Islam. Although Islam believes just to help people around you for limited time to make them stable and betterment of society (Ayagi, 1997). Islam promotes kindness and appreciates people to help poor individual by giving *zakat* and *sadaqa* (Weiss, 2003; Abdullah & Suhaib, 2011). But Islam gave rules which provide people a guideline that how can a person help others and encourage them to be independent. These principles given by Holy Quran are also supported by Hadith of Holy Prophet (SAW). Islam clearly delivered a procedure of earning money in respectable manners and according to law. Moreover, Islam hates of being dependent and earrings which a person gets without handwork. Only a person can ask money from others when he needed it badly and couldn't get it by doing some work. After getting assistance when a person fulfills his need and become normal, then he need to do his only earning and refuse to get assistance from others (Mudanssir, 2010).

There are many factors which are associated with begging, i.e., physical disability, lack of resources, culture, need to lead a proper life, and the insufficiency of social security, alcohol, and drug (Tambawal, 2010). Demographic factors like gender, social background,

marital status, education, religion, and body physique are also known to play an important role in patterning and making the beggars' informal social relations and in defining the selection of friends (Demewozu, 2005).

According to the different studies carried out in Spain (Vega, 1996; Vielva, 1992) and elsewhere (Nahhas, 2016; Banyard, 1993; Wright & Weber, 1987; D'Ercole & Struening, 1990; Padgett, Struening, Andrews, & Pittman, 1995; Alexander, 1996; Ingram, Corning, & Schmidt, 1996), beggars have experienced an extraordinary number of traumatic events in the course of their life. Such a great quantity of stressful events may not only affect an individual's mental and physical health, but also weaken his social networks. All of these are aspects closely related to the beggary. Moreover, a high incidence of stressful situations may have an even more negative impact on beggars with mental disorders (Calsyn & Morse, 1992).

Poverty, deprivation and disability are the leading causes of beggary, because of rapid socio-economic changes and abuse of children and women (Mahmood, 2018). Hasan (2005) explored two types of factors behind beggary. Which are push factors; as poverty, trapped by mafia, broken homes, disability, inherited profession, and unemployment of the male member, and pull factor; profitable business, easy ways of earning, generous attitude of people towards alms giving, etc.

The situation converts worse when it is confronted by urban areas of less developed nations. However, despite the prominent display of this issue in developing countries some people still look begging as part of a norm in society (Ogunkan & Fawole, 2009; Johnson, 2008).

Typical locations for beggars include: at traffic signals, entrances of official building, ATMs, parking places, transport bulges (including bus and rail stations, toll way entrances and major road intersections), cultural grounds (specially near the entry gates for tourists), major sports venues, petrol stations, churches or mosques, convenience and grocery stores (Adugna, 2006; Berg, 2001; Onoyase, 2010; Sohail, 2012). In Pakistan, beggars are seen everywhere in markets, at traffic signal, in front of hospital, religious places. Even they could be seen at every corner of street (Khan, 2013).

In Pakistan, the beggars use diverse strategies to get the sympathies of public and to convince them to give them money according to the location of beggary. They often come out every time with new stories to get attracted by the people. Some of them are drug addicts and ask for money to get medicines, for these beggars at many public spots showing prescription of medicines by doctors, asking financial support on the excuse of that prescription (The nations, 2012). The donations seekers generally use tricks to play with people's emotions manipulating them with fake tears as well as discussing their mishaps (Ayan, 2011). Moreover, beggars can also be found on every traffic signal knocking car door and asking for money by using different mode. These beggars can be elder people, group of family looking healthy individuals as well as injured people. There are also physically disabled beggars, asking money in the getup of third-gender, beggars using mode of selling things and car screen cleaners. Some religious sanction or religious teachers encourage people to become beggars to get their desired things and there are also organizations in which they train children. Orphans and kidnapped children are engaged in this profession from early childhood, such children go on to become expert over time (Sarwar, 2012).

Beggar children earn more than two hundred rupees per day and handover entire money to the leader of the mafia (which works for this profession). The mafia keeps a big mass of earning and gives minimum amount to these children to take home (Human Rights and Labor, 2006). A media report of Lahore (Ayan, 2011) has shown that a normal city beggar collected around Rs 1,000 per day, whereas the paralyzed ones or those with facial disfigurations, easily made Rs2000 in a day. However, during the Eid days these beggars can earn up to Rs 3,000 to Rs 4,000 in a day, as people easily depart with money in the name of Eid.

There is no doubt that being beggary has a significant impact on a person's well-being. It affects people in different ways and on many different levels. The experience of beggary is different for everyone. It effects not only the life of the individual and family but also have impact on the whole society. People who are poor often have to make choices out of very limited options as beggary is the most extreme form of social exclusion and is a strong indicator of social injustice in any society (Downey & Hickey, 2004). Poverty and social exclusion can affect all age groups (Seymour & Costello, 2005).

The beggars and poor people are also vulnerable to further psychological and physical health problems. They have an unacceptably high risk of progressive morbidity, preventative diseases and premature death. Moreover, they are vulnerable and experience higher rates of Hepatitis-C, Tuberculosis, HIV, poor nutrition, alcohol, and drug addiction and mental health difficulties than the general population (Lawless & Corr, 2005). They are also more prone to poor dental hygiene, respiratory disorders, foot problems, skin complaints and leg ulcers. Beggary can mean uncertainty, with all gender and ages finding it difficult to plan for the future due to a lack of constancy in their lives (Hickey, 2003).

If people beg as professionals, implies that they blind the human honor inside of them. This feeling of honor would prevent them from begging or doing any other demeaning act. Every individual has the instinct to protect his/her moral existence. Also known as self-esteem or self-worth, this feeling has to do with one's respecting/loving himself/herself. Losing this feeling will ultimately make the individual act in a negative way as if a natural thing. Those who lose this feeling of self-esteem and involved into beggary as a profession aim at one thing: splitting off anything, in any possible way (Calsyn & Morse, 1992).

Beggary has a significant effect on individual's psychological wellbeing mental health. They have to face feelings of isolation, loneliness, low self-esteem, lack of confidence, insecurity, anxiety, depression, mental ill health, an increased sense of fear and also shame and guilt (Brooke, 2004).

Several researches have been carried out on psychosocial causes and psychological effect of beggary. Baltazar, Namwata, Maseke, Mgabo, and Dimoso (2010) explored that street begging happens due to demographics of people in urban areas of central Tanzania. The findings showed begging increased in streets on Fridays and others holidays. The demographics such as age, gender, family system, education, marital status, and physical condition of street beggars reveal that physical disabled, male, single, widowed, and illiterates' people are prone to begging among natives or indigenous.

Horn and Cooke (2002) examined the factors of beggary. They found that economic restructuring is a main cause of begging because of this issue unemployment happened among low skilled workers. Affordability problem also happened due to inflation especially with those people who migrate to urban areas because policies were not made to fulfill their desired objectives (Merga, 2022). Gloria and Samuel (2012) found that homelessness, unemployment, poverty, and family rejection are the major factor of begging which causes distress, restlessness, and poor wellbeing. Iqbal (1998) explored that female beggars beg for various reasons that are poverty, family breakdown, migration towards big city, inherited profession, changing circumstances, broken homes, physical disability, mental deficiency and unemployment of husband.

Gruenewald, Kemeny, Aziz, and Fahey (2005) examined those social situations such as beggary or poverty effects an individual's social self, increase feelings of worthlessness especially feeling of shame, as well as decrease feeling of self-esteem. Rashid (2002) explored the psychological aspects of the lifestyle of women beggars. Majority of the women have significantly low self- concept and living without the personal identity.

Begging has become a profession which is a reason of many criminal activities in every society which include narcotics selling, drug abuse, burglary, prostitution, bullying and sexual abuse. This also makes beggars to stay in their comfort zone. These people don't have any motivation to do work to spend a quality life. There are few people who are actually needy but majority are in habit of begging (Hasan, 2005).

There is no proper law and policy has been made to handle the alarming profession of beggary in Pakistan. According to the report of Lawyer, in 2011, the Lahore High Court ruled that the government should strictly enforce laws to discourage "professional beggary," set up homes for the destitute and improves charity disbursements. In its response police arrested almost 300 beggars from different sites of Lahore. Majority of them were bailed and once they released, they again start begging (Gilani, 2013). Government of Punjab set up a Bureau for child protection and welfare in 2004 to rehabilitate special and deprived children those who engaged in begging. The Child Protection Welfare Bureau (CPWB) is collaborating UNICEF which supported to it to develop rehabilitation services for beggars and handicapped children (UNICEF, 2012).

It is to be concluded that beggary has become a profession and has different causes e.g., biological, social, economic, religious and psychological factors. It may affects self-concept and self-esteem on individual. There is no society which can claim nonexistence of beggars. Despite being a universal phenomenon, begging behavior did not get much research attention by behavioral and social scientists. As there is not much scientific research on beggars' modes, causes as well as its psychological implications. It is equally beneficial for behavioral and social scientists, as well as for planners and policy makers.

Objectives

Objectives of the qualitative studies are to explore:
1. The psychosocial reasons of begging behavior in beggars.
2. The modes of begging adopted by the beggars.
3. The effects of the beggary.

Research Questions
1. What are the reasons of begging behavior in beggars?
2. Which modes of begging are adopted which type of the beggars?
3. What are the effects of beggary?

Method

In this qualitative study, in-depth interview was used to explore modes of begging, reasons of begging, people attitude and effects of beggary on beggars. Since begging behavior is caused by a number of personal factors, the interview method was used instead of focus group.

Participants/Sample

Purposive and convenient sampling strategy was used to select the sample. Fifteen participants (males = 6, females = 9) were interviewed. The participants were approached at numerous crowded areas such as parks, markets, traffic signals and bus stops from the different areas (Two campuses of University of the Punjab, Iqbal town, Faisal town, Gardon town, Model town, Yadgar chowk, and Mall road) of Lahore City of Pakistan. They ranged in age between 10 to 60 years and those who could understand Urdu language were included. A total of 26 beggars were approached and 15 agreed to participate. So, the response rate of the participants was approximately 60%.

Demographic Information

There were total 15 participants ($N = 15$), including both males ($n = 7$) and females ($n = 8$). They ranged in ages between 10 to 60 years ($M = 44.67$, $SD = 11.74$) and 10 participants were uneducated while the other five were educated 2nd grade to 10th grade range. As far as marital status was concerned, six participants were married, six were widowed, two were unmarried and one participant was divorced. All of them were Muslims.

Assessment Measure

Interview protocol was prepared after taking the beggars' point of view regarding the causes of beggary through interviewing, and in consultation with the existing literature (Ahamdi, 2003; 2010). Interview protocol included questions pertaining to psychological, social, economic causes of begging, modes, people attitude, and psychological effects of beggary. It comprised of open-ended questions so that participants could elaborate their subjective views in detail. In the light of participants' responses, few amendments were made in the existing questionnaire. The final draft of questionnaire consisted of 25 questions including demographic information as well.

Procedure

Potential participants were approached at public places such as parks, markets and traffic signals. Consent from the beggars was taken and they were assured that their identity would be kept anonymous and their responses confidential. After acquiring consent for this research, interviews were conducted at the road side. The interview schedule, took 20 to 30 minutes for each participant. After the interview, each participant was thanked and was paid Rs. 20 to 50 as some of them asked for payment for giving time.

Interpretation of Data

Information gathered from the interviewees was transcribed and the themes were extracted from a larger pool of data. Interpretative Phenomenological Analysis (IPA) was used to interpret the data. IPA is a qualitative research approach that investigates how people make sense of their major life experiences. In IPA, data is gathered from participants using techniques like interview and focus group. The verbatim of the research participants was transcribed and themes were extracted which represent the experiences of the participants (Smith, Flowers, & Larkin, 2009).

Results

The analysis of the data revealed six main categories each with a number of subordinated categories that substantiate the central or core categories.

Table 1
List of Main Theme and Subordinate Themes

Main Theme	Subordinate Themes
Causes of Beggary	
Physical	Old age
	Poor health
	Physical disability
Social	Unemployment
	Poverty
	Lack of source of income
	As a Profession
	Death of the family head
	Lack of professional skill
Psychological	Loss of self-respect
	Feeling of worthless
	Insecurities about life
	Tensions due to poverty
Modes of Begging	Illness and handicap
	Religious assists
	Selling Cheap things
	Begging in group form
Psychological effects	Low self-esteem
	Shame and Guilt
	Sadness and helplessness
	Inferiority feelings
	Feeling of loneliness
People attitude towards beggars	
Positive	Sympathies
	Supportive
	Generous
Negative	Neglect/Ignorance
	Insult
	Degrade
	Rejection
	Criticism
	Hurting
Beggars' attitude towards beggary	
Positive	Easy way of living
	Satisfied
Negative	Cheap way of Living
	Insulting
	Helplessness
Beggars' suggestion to alleviate beggary	

	Government should take Measures
	Children should take care of their parents
	Financial support (from rich people)

Causes of Beggary

Results indicated that there are physical, social and psychological causes of beggary.

Physical Causes

Some of the participants begged due to their old age as they perceived as having no alternative way to earn to fulfill their basic needs. They think that they have become physically week. Besides old age, some other reported physical reasons of beggary included poor health and physical disability.

Social Causes

Social causes have higher percentage (65.7%) than physical and psychological causes. Majority of the beggars were unemployed. Some beg because they have no other source of income, they lack professional skills, or because of the death of the earning family head. Poverty was found to be the main social cause of beggary.

Psychological Causes

There were some psychological causes of beggary. Some individuals felt they were unworthy of doing 'decent paying job'. They had no/low self-respect that's why they involved in beggary.

Moreover, there were some insecurities and survival problems that if they did not beg their children would not have survived and even, they could not be able to fulfill their basic needs.

Modes of Beggary Reported by Beggars

1) Illness and handicap

Beggars had been asked for money after displaying their illness and disability and generally also portrayed to be miserable. As a young woman by showing medicine prescription which seemed fake as it looks very old and asked money to purchase medicines or by taking some physically handicap person with her, who seemed as if he was her husband, a young woman demand for money.

2) Religious Assists

Some people had been asking for money in the name of Allah and religion as they ask for charity from others. An old blind beggar was asking money from others in bus by first reciting verses of Holy Quran and then describing his life problems in recital way that he has not supported by his family.

3) Selling Cheap Goods

Beggars also ask for money by selling cheap goods such as flowers, pencils and eatables to show that they are not beggars, but some of them did not even bother to provide goods in return of money. As, begging by selling twigs as to insist people to buy that article from him as he has not eaten since last night although he seemed energetic.

4) Begging in group form

According to the beggars a majority of the people beg in group form although it seems as they beg alone. Two physically weak boys were asking for money together by saying that they wanted to eat something as there was no family member who can support them.

Psychological Effects

Beggars reported some psychological implication of begging. As beggars are prone to experience some negative emotions, they frequently reported to experience low self-esteem, guilt, shame, dissatisfaction, being insulted, sadness, feelings of loneness, helplessness and inferiority.

1) Low self esteem

Beggars reported low self-esteem which is reflected in their verbatim:

Poor people cannot do anything else.

2) Shame and Guilt

They feel shamed and guilt as shown from their verbatim:

Beggary is a shameful profession. We feel sham and disgrace. Poor people have a difficult life and they also have to involve in this shameful profession

3) Helplessness and sadness

They also showed feelings of helplessness and sadness as a result of beggary:

It's a wrong job and there is no satisfaction in this profession. I feel sad and wish that I was born in a good family

4) Feelings of loneliness

The feelings of loneliness were also reported by beggars:

It's not a good profession as everyone left me alone.

5) Feelings of inferiority

They have also inferiority complex as:

I feel inferior and low among people.

Peoples' Attitude towards Beggars

Beggars reported that people had different types of attitudes towards beggars that they generous and show positive attitudes, such as sympathy, to give charity and also have supportive attitude. Majority of the beggars reported that others have a negative attitude towards them such as disgrace, disrespect, criticism, insult and hatred towards beggars.

Beggars' Opinion about Beggary

Mostly beggars had negative opinion towards beggary, while some beggars seemed to have satisfactory or pragmatic approach towards begging.

Solution of Beggary

Beggars suggested some measures to eradicate beggary. Those solutions were: government should take steps, children should take care of their elderly parents, financial support, etc.

Summary

Physical, social and psychological were reported as causes of beggary. Old age, physical disability and suffering from serious diseases are found to be the leading physical causes. Social causes of the beggary included poverty, unemployment and lack of professional skills. Psychological causes of beggary included feelings of worthless and lack of self-respect. Beggary has psychological implications such as low self-esteem, guilt, shame, dissatisfaction, insult, sadness, feeling of loneness, helplessness and feeling of inferiority. As concern with the modes of begging the sentimental mode, religion mode, selling cheap goods, and group form. Moreover, while begging the beggars have to face different attitudes of people and it ranges

from positive to negative attitudes i.e., sympathy, kindness, support, hatred, degradation, and verbal abuses. As beggars have to face such an insulting attitude most of them held negative opinion about bagging while a few were satisfied with it. Regarding the solutions of bagging, measures to control poverty by government, fulfillment of adult children's responsibility towards their elderly parents and financial support by rich man were suggested by the beggars.

Discussion

The present research aimed to investigate the psychosocial reason and psychological effects of beggary. In Pakistan, majority of the researches have focused on the demographic information and social causes of beggary. Limited literature exists for the psychological causes and implications of beggary and also about the modes of begging. So, the present research aimed to fill that gap. The qualitative analysis was carried out to explore the psychosocial causes of beggary along with psychological effects of beggary.

The findings indicated the underlying causes of beggary; physical, social and psychological. As far as physical causes are concerned, in majority of the beggars' old age, physical disability and suffering from serious diseases were found to be the leading physical causes of beggary that is consistent with the findings of Mesele and Addis (2020); Olawale and Adenivi (2008), found begging behaviour common among people with special needs, the people with visual, hearing impairments, and with physical handicaps. Driedger (1991) also found that disability is a functional limitation within the individual caused by physical, mental or sensory impairment and handicap means the loss or limitation of opportunities to participate in the community on an equal level with others due to physical or social barriers. These both types of individuals may involve in antisocial behaviors such as beggary as Barnes (1992) explored that disable people have need to ask from others for their basic necessities of the life.

It can be argued that majority of the people with low income could not save for their old age, so they can fulfill their basic necessities, and in that phase of their age they could not found any financial support and they might not be capable for doing any job due to age factor and overall economic situation of the country, all these things could be the reason of their beggary. Disabled or diseased people have limited opportunity for earnings in Pakistan due to many circumstantial factors such as there are no training and vocational institute for these people which might be a cause to make them more prone towards the institution of beggary. Moreover, physically disable baggers were seemed to approach people with less hesitation than physically healthy baggers as if they justified their begging through internalization their underlying cause of beggary.

The social causes found to have greater percentage than both physical and psychological causes, which were poverty, unemployment and lack of professional skills. Similar finding has been reported by Gloria and Samuel (2012) also suggested the same as they found, main and significant reasons for begging are poverty, unemployment, homelessness and family rejection. Poverty leads towards the food insecurity in population which may be the major reason of an individual to ask help from other people (Hameed, Padda, & Salam, 2020). Mesele and Addis (2020) found that prominent causes which force an individual to beg are poverty and economic problems in families, homelessness are common. Horn and Cooke (2002) also found that particular factor of beggary are unemployment among low skill workers and low pay jobs, domestic problems, poverty, and low educational attainment. Moreover Hasan (2005) found that broken homes, poverty, unemployment of male members of the family and

disability are responsible for female beggary in the society, while Iqbal (1998) found that female beggars beg due to poverty, family breakdown, inherited profession, changing financial circumstances, broken homes, physical disability, mental deficiency, and unemployment of husband. Moreover, these finding were also consistent with the findings of the third study of the present research project in which it was found that the reasons of beggary were physical included age factor, disability and any other medical problem and poverty in case of male beggars while majority of the female beggars reported their reasons of beggary as forced by family head as beggary as their family profession.

It can be said that high score of social causes of beggary could be the due the economic disparity with loosening primary social fabrics in Pakistani society might be a leading cause of beggary. Unemployment are increasing day by day as there are less formal and informal vacancies in job for both educated and uneducated due to numerous macro and micro factors such as power shortage, inflation etc. because of which not only uneducated but educated people seemed to beg to live. However, a big mass of female population begs due to their stays-at-homes husbands as those female beggars have to feed their children with them.

It has been found that psychological causes of beggary involved feelings of worthless, lack of self-respect, and feelings of insecurities about their future to fulfill their basic needs. Kaur and Wim (2002) explored similar kind of findings that people with low income suffered from psychosocial outcomes due to the other people especially family members. With lack of self- confidence, self-respect and feelings of worthless the person ends up as a beggar.

As far as psychological causes are concerned it seemed to assist physical and social causes of bagging same as in the case of most of common people in their daily lives. In Pakistan majority of the youngsters cannot found proper way of earning to fulfill the basic needs of their families which leads them towards low feelings of self-worthless and lack of self-respect and they feel no shame to ask financial support from others.

As concern with the modes of begging the sentimental mode, religion mode, selling cheap goods, and group form mood were among the most common modes. Wassan and Khuro (2011), while discussing similar sort of begging modes, argued that beggars have horrific appearances or disabilities that are a convenient tool for getting money from other people. They found many other ways of baggers to get money as baggers use religious connotations of charity, play with the sentiments of the people by showing their amputation etc.

As society is moving towards modernity day by day, traditional ways lost their validity. There is hardly any profession or any aspect of everyday life where newer ways cannot be witnessed, same as in the case of begging. Today's beggars adopted newer ways to beg with old traditional ones to play with the sentiments of the people and get a desirable amount of money.

Moreover, while begging the beggars usually face different attitudes of people towards them which range from positive to negative attitudes involve sympathy, kindness, support, hatred, disregard, and verbal abuses. As beggars have to face such an insulting attitude most of them held negative opinion about bagging while a few found to be satisfied with beggary. These findings seemed consistent with Ahmadi's (2010) who found that people showed both negative and positive attitude. Majority people showed very kind attitude for beggars but some of them

showed hatred towards beggars and also begging behavior. Kaur and Wim (2002) also confirm the findings that majority of the people dis regards the beggars who asked for financial supports from them.

It was observable in Pakistani society that people showed less aversive attitude towards less ugly and cleaner beggars. People go by their stereotypes about begging and religious concerns. People also found to reject less baggers and to give more money in the sacred month of Ramadan and on certain occasions such as on Fridays. While, overall, people respond in affirmation to aged and female baggers and the affirmative respond rate were highest in case of old female baggers.

Regarding the solutions of begging, measures to control poverty by government, fulfillment of adult children's responsibility towards their elderly parents and social support were suggested by the beggars according to the findings of the present study. Consistent findings have been revealed that some of the beggars perceived beggary as a sin and wanted to get rid of it and willing to adopt some socially accepted profession with the help of the government (Sohail, 2010).

These findings showed that beggars wished to leave this profession although it could be seen in this culture that they are not willing to do any respectable job which required their hard work as they are habitual for this easy way of earning to fulfill their basic needs. It could also difficult for them to get rid of beggary as they beg under some organization or mafia which might not be allowed them to leave this profession of beggary.

Limitations and Suggestions
limitation of the study is that the researcher intended to conduct the focus group with beggars which could offer more reliable and distinguished answers but it could not be managed because participants were approached at their work places and had no time to sit together to talk about the matter of the study so the interviews were more convenient for receiving their response.

Another limitation of the study is the availability of the time of the participants which was very short. A possible reason might be that data was collected in the areas where they beg and busy with their work. This might affect their responses. There was no provision for any separate place where could be talked to the participants to about their personal views.

Implications
The presents research adds the knowledge about that how beggary affect the beggars. Begging has become a social evil in Pakistani culture which needs to be tackled soon. The most effective approach seems to solving the issue of begging is through counseling. It is a process of helping clients to engage in better choices. In this regard, begging is a maladaptive behaviour in which counseling can help beggars change modifies the way they think, act and feel. One of the strategies that counselors can utilize as an intervention in such cases is Rational Emotive Therapy. This approach will enable beggars to change their illogical mode of reasoning and boost their image and self-concept so that they in turn will find reason to believe in themselves and in their abilities to work instead of begging alms.

References

Abdullah, M. & Suhaib, A. Q. (2011). The Impact of zakat on social life of Muslim society. *Pakistan Journal of Islamic Research, 8,* 85-91.

Adugna, G. (2006). *Livelihoods and survival strategies among migrant children in Addis Ababa* (Master of philosophy in development studies). Norwegian University of Science and Technology (NTNU), Faculty of Social Sciences and Technology Management, Department of Geography, Trondheim, Norway.

Ahamdi, H. (2010). A study of beggars' characteristics and attitude of people towards the phenomenon of begging in the city of Shiraz. *Journal of Applied Sociology, 39*(3), 135-148.

Ahmadi, H. (2003). *Social psychology.* Shiraz publication center: Shiraz University.

Alexander, M. J. (1996). Women with co-occurring addictive and mental disorders: An emerging profile of vulnerability. *American Journal of Orthopsychiatry, 66*(1), 61-70.

Ali, A. S. A. (2019). Psycho-Social Determinants of Street Beggars: A Comparative Study in Jordan. *Journal of Content, Community & Communication, 10*(5), 96-113. DOI: 10.31620/JCCC.12.19/11

Asrese, K., Tilahun, T., & Mekonnen, A. (2014). Demographic and Socioeconomic Determinants of Women Begging in Bahir Dar, Ethiopia, 2007. *Humanities and social sciences, 2,* 75.

Ayagi, I. A. (1997). *Current socio-economic realities: An instrument for the perpetration of destitution.* A paper presented at the National Conference on Begging and Destitution held at Arewa House conference room, Kaduna, Nigeria.

Ayan, M. (Sunday, November 06, 2011). *City sees influx of beggars prior to Eid-ul-Azha.* Daily Times. Retrieved from: http://www.dailytimes.com.pk/default.asp ?page=2011 %5C11%5C06%5Cstory_6-11-2011_pg13_1

Baltazar, M. L. Namwata, Maseke, R. Mgabo, & Dimoso, P. (2010). *Demographic dimensions and their implications on the incidence of street begging in urban areas of Central Tanzania: The case of Dodoma and Singida municipalities.* Institute of Rural Development Planning. Tanzania: Dodoma.

Banyard, V. L. (1993). A taking another route@. Daily survival narratives from mothers who are homeless. *American Journal of Community Psychology, 23*(6), 871-891.

Barnes, C. (1992). *Disabling imagery and the media: An exploration of the principles for media representations of disabled people.* England: Ryburn Book Production, Halifax.

Becker, H. (1963). *Outsiders.* New York: Free Press

Berg, B. L. (2001) *Qualitative research methods for the social sciences.* Allyn and Bacon: United States.

Brooke, S. (2004). *Housing problems and Irish children: The impact of housing on children's wellbeing.* Dublin: Children's Research Centre

Bryson, L. (2004). *Social change, suburban lives: An Australian newtown.* St Leonards, NSW: Allen and Unwin.

Calsyn, R. J. & Morse, G. A. (1992). Predicting psychiatric symptoms among homeless people. *Community Mental Health Journal, 28*(5), 385-395.

D`Ercole, A. & Struening, E. (1990). Victimization among homeless women: Implications for service delivery. *Journal of Community Psychology, 18* (2), 141-152.

Demewozu, W. (2005).Begging as a Means of Livelihood: Conferring with the Poor at the Orthodox Religious Ceremonial Days in Addis Ababa.*African study monographs, 29*(Supplementary issue), 185-191.

Downey, D. & Hickey, C. (2004).*Hungary for Change: social exclusion, food poverty and homelessness in Dublin*. Dublin: Focus Ireland.

Driedger , D. (1991). *International Development Officer: Coalition of Provincial Organizations of the Handicapped (COPOH).* Canada: Winnipeg publishers.

Enam, K. (2021). Child Beggars. Retrieved from: https://www.dawn.com/news/1651561

Gilani, M. (2013). *Begging Becomes Business in Pakistan.* International world. Retrieved from: http://www.thejakartaglobe.com

Gloria, O.& Samuel, A. (2012).The Prevalence of Street Begging in Nigeria and the Counseling Intervention Strategies.*Review of European Studies, 4*(4), 77-83.

Gruenewald, T. L., Kemeny, M. E., Aziz, N., & Fahey, J. L. (2005). Acute threat to the social self: Shame, social self-esteem, and cortisol activity. *PsychosomaticMedicine, 66,* 915-924.

Hameed, A., Padda, I. H., & Salam, A. (2020). Estimating the Socio-Economic Factors of Food Insecurity in Pakistan: A Regional Level Analysis. *FWU Journal of Social Sciences, 14*(2), 81-94.

Hasan, S. (2005).*Causal factors behind the female beggary in Lahore* (Unpublished Master Thesis).Institute of Social and Cultural studies, University of the Punjab, Lahore.

Hickey, C. (2003).*Hungary for Change: Social exclusion, food poverty and homelessness in Dublin.* Dublin: Focus Ireland.

Horn, M., & Cooke, M. (2002). Understanding Begging in our Public Spaces'.*Parity, 15*(1), 10.

Human Rights and Labor (2006).*Country Reports on Human Rights Practices.* Retrieved from: http://www.state.gov/g/drl/rls/hrrpt/2005/61641.htm

Ingram, K. M., Corning, A. F., & Schmidt, L.D. (1996). The relationship of victimization experiences to psychologicalwell-being among the homeless womenand low-income housed women. *Journal ofCounseling Psychology, 43* (2), 218-227.

Iqbal, K. (1998). *Psychological study of female beggars in the city* (Unpublished master thesis).Department of Psychology, GCU, Lahore.

Jelili, M. O. (2006). *Environmental and Socio- economic Dimensions of Begging in Ilorin and Ogbomoso* (Published M.tech dissertation).Department of Urban and Regional Planning, Ladoke Akintola University of Technology, Ogbomoso, Nigeria.

Johnson, J. (2008), *In tough times, panhandling may increase in Oklahoma City*. The Oklahoman. Retrieved from: http://newsok.com/in-tough-times-panhandlingmay-increase-in-oklahoma-city/article/3318618

Kaur, H. & Wim, V. B (2002). Rehabilitation of Leprosy- Affected People: A study on Leprosy Affected Beggars. *Leprosy Review, 73,* 346-355.

Khan, H. (2013).*Beggar Mafia.* Retrieved from: http://shrewist.com/beggar-mafia/

Lawless, M. & Corr, C. (2005).*Drug Use among the Homeless Population in Ireland.* Dublin: NACD

Lewis, O. (1998). The Culture of Poverty. *Society, 35*(2), 7-30.

Mahmood, A. (2018). Giving children in street situations in Jordan hope for a brighter future. Retrieved from: https://medium.com/@unicefjordan1/giving-street-children-in-jordan-hope-for-abrighter-future-d0e561d78a92

Mansour, E. (2017). An explanatory study into the information seeking-behaviour of Egyptian beggars. Journal of Librarianship and Information Science, 49(1), 91-106.

Merga, G. (2022). Determinants of Economic Condition of Rural-Urban Migrants at Place of Destination: The case of Nekemte City, Western Ethiopia. *FWU Journal of Social Sciences, 16* (2), 97-107.

Mesele, H. A., & Addis, D. (2020). Socio-Economic Causes and Consequences of Begging in Dessie City, North East Ethiopia. *SSRG International Journal of Humanities and Social Science 7*(4), 120-130. https://doi.org/10.14445/23942703/IJHSS-V7I4P118

Mudanssir, A. Y. (2010). *Street begging and Islamic injunctions: Positive or negative.* Daily Triumph (Wednesday, August 25, 2010).

Nahhas, R. (2016). Begging an alarming phenomenon in Jordan. Retrieved from https://thearabweekly.com/beggingalarming-phenomenon-jordan

Najafi, Abrandabadi, Hossein A., Zadeh, H., Jafar, M., Babaji, & Ali, M. (2004). Material (deterrent) penalties. *Modarres Quarterly, 31*(4), 23-48.

Ogunkan, D. V., &Fawole, O. A. (2009). Incidence and socio-economic dimensions of begging in Nigerian cities: The case of Ogbomoso. *InternationalNGO Journal, 4*(12), 498-503.

Olawale, S. G. & Adeniyi, E. O. (2008).Etiological Attributions Of Alms-Begging Among People With Special Needs: Differential Perceptions Of Persons With Special Needs In Oyo State, Nigeria. *International Journal of Emotional Psychology and Sport Ethics, 10*, 176-186.

Onoyase, A. (2010). Effective Methods of Combating Street Begging in Nigeria as Perceived by Panhandlers.*Stud Home CommSci, 4*(2), 109-114.

Padgett, D. K., Struening, E. L., Andrews, H., & Pittman, J. (1995). Predictors Of Emergency Room Use By Homeless Adults In New York City: The Influence Of Predisposing, Enabling And Need Factors. *SocialScience Medical, 41* (4), 547-556.

Rashid, M. (2002). Psychosocial aspects of the lifestyle of women beggars (Unpublished Master Thesis). NIP, Quaid-i-Azam University, Islamabad.

Sarwar, S. (2012*). More and more adoptingart of beggary.*Daily Times.Retrieved from: http://www.dailytimes.com.pk/default.asp?page=2012%5C02%5C17%5Cstory_17-2-2012_pg13_4

Seymour, M. & Costello, L. (2005).*A Study of the Number, Profile and Progression Routes of Homeless Persons Before the Court and in Custody*. Dublin: Centre for Social and Educational Research, DIT.

Sobhani, N. (2008). The phenomenology of street children.*House of correction magazine, 1*(3), 36-42.

Sohail, S. (2010).*Beggar's Mafia.* Retrieved from: www.dadabhoy.edu.pk/Articles /beggars%20mafia.pdf.

Tambawal, M. U. (2010). *The Effects of Street Begging on the National Development: Counselling Implications.* A Paper Presented at the 1st national Conference of the Counselling Association of Nigeria (CASSON) Katsina State Chapter from 7th- 10th June 2010.

The Nations (August 11, 2012). *Campaign launched against professional beggars.*Trending Discussions. Retrieved from:http://www.nation.com.pk/pakistan-news-newspaper-daily-english-online/islamabad/11-Aug-2012/campaign-launched-against-professional-beggars

UNICEF, (2012). *The Child Protection Report 2012.* Retrieved from: http://www.unicef.org/pakistan/index.html

Vega, L.S. (1996). *Salud Mental en Población SinHogar (Mental health in the homeless population)*.Oviedo: SESPA.

Vielva, C. (1992). Estréspsicosocial y alteracionesemocionalesen transeúntesmarginados.Papel modular delasredes de apoyo social (Psychosocial stress andemotional alterations in marginal transient people.Modular role of social support networks). *Intervención Psicosocial, 1*, 79-86.

Wassan, A. A. & Khuro, S. (2011). Beggary in District Sanghar: A Sociological Analysis of Shahdadpur, Tandoadam and Sinjhoro Subdivisions.*New Horizons, 10* (2), 28.

Weiss, H. (2003). *Obligatory Almsgiving: An Inquiry into Zākāt in the Pre-colonial Bilad al-Sūdān*. Studia Orientalia 96, Helsinki: Finnish Oriental Society.

Wright, J. D. & Weber, E. (1987). *Homeless and health.* New York: McGraw-Hill.

An Analysis of Character-Building And Motivation Behind Coins-Sowing Tradition By The Sasak in Lombok Island, Indonesia

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The Sasak coins-sowing tradition in Lombok Island is part of newborn baby haircut activities. The newborn baby haircut tradition in Islam is called *Aqiqah* and, in the Sasak language, refers to *Ngurisan.* This tradition has been practiced for years and continues to this day. This research analyzes the Sasak community's motivation in performing the coins-sowing tradition and explores the character-building values internalized in the coins-sowing practice. The method applied in this research is qualitative, using an ethnographic approach. The research result indicates that the primary motivation for the coins-sowing tradition is a form of gratitude to God the Creator because they are blessed with offspring. In such practice, the character-building values taught at an early age are hard work, sharing with others, and strengthening good relationships among the Sasak people. The combination of motivation and character-building values makes this coins-sowing tradition still practiced today. This research contributes to the sustainability tradition of the Sasak tribe in Lombok.

Keywords: Sasak tribe, Motivation, Character-building, Coins-sowing

Character-building is an educational process that is highly regarded in Indonesia. The wide range of juvenile delinquency cases, brawls, drug abuse, moral degradation, promiscuity, and other demoralization make character-building very important to implant (Arifin et al., 2017; Atmajawati & Hening, 2018; Suyatno et al., 2019). Indonesia places excellent emphasis on character-building from an early age, as emphasized in the Government Regulation of the Republic of Indonesia No. 87 of 2017. Character-building problems are also global issues, particularly how to implement character-building (Savucu et al., 2017; Rambe et al., 2018).

Indonesia has a very wide area. In addition to its vast territory, it also has various customs and ethnic languages (Soemarmi & Diamantina, 2019). Ethnic differences and traditions in Indonesia are united with the union and Indonesian unity (Annurua & Nurani 2019; Bria 2018). These various kinds of cultures and customs need to be preserved. Cultural preservation that embodies noble and religious values must also be strengthened and maintained (Dulmanan 2020; Khairiah & Walid 2020; Wijoyo 2021). The numerous cultures and customs differ from one region to another. Even one province can have more than one ethnicity or culture (Hidayah 2017). Likewise, various kinds of dances, songs, and ritual beliefs exist in different regions (Busro & Qodim 2018; Manan 2019). These various customs are not only a tradition or entertainment but also have educational meanings and noble values (Melalatoa, 1997).

The government and schools constantly try to instill character-building in children from an early age in school. The effort to instill character-building should be carried out purposely and actively within the school environment. The most crucial character-building, especially for children, are honesty, responsibility, caring, daring to defend the truth, and so on (Komara, 2018). The effort to continue doing good deeds is an actual realization of character-building in children (Farida 2016). Character-building is closely related to moral values. Belief in God Almighty is the primary value of character-building (Wigunadika 2018; Hayati & Usriyah 2020). Character-building is a process of heart, intention, and physical exercise. The tangible result of character-building is that children are honest, responsible, and hard-working. Likewise, with the attitude of always caring for others and other good attitudes, as said by Ki Hajar Dewantara, a role model in Indonesia's education world (Asa, 2019).

Chatathicoon et al., (2022) studied early-age children's cooperative behavior in Thailand. The score of students' post-cooperative behavior in the experiment group gets a better result than the score of pre-cooperative behavior. Some cooperative behavior shown by the students were feeling perception and conflict resolution—social skills, expression of ideas, and making selections and decisions. The analysis of the role of Islamic boarding schools and Islamic schools in developing Indonesian character has been studied by Iqbal and Akram (2020). The analysis result explained that Islamic boarding and Islamic schools' role is highly influential in Indonesian education, particularly in building students' character at an early age. Islamic-based and boarding schools have contributed substantially to generating renowned leaders in Indonesia. The influence of religion on people's ethics and morals from the intrinsic and extrinsic sides has been reported by Anriani et al., (2022). Their research report showed that the role of religion is highly influential on people's ethics, morals, and mental health. This finding implied that there is a strong connection between mental health and faith within society.

Sasak ethnicity is the dominant people, in terms of their numbers, living in Lombok island, West Nusa Tenggara. Most Sasak people lived on Lombok island, while the rest lived in Sumbawa, Java, and other regions (Rahman, 2013; Budiwanti, 2000). The word '*Sasak,*' the basic meaning of the Sasak language, is *'Sah'*/legitimate or to go and means *'Saka,'* which means ancestor. Thus, the word Sasak is entirely can be interpreted as going to the ancestral land (Suwondo, 1994). The *Sasak* ethnicity has customs, which are known as *Sasak* customs. These sources of such custom can be found in works of art, creations, religious rituals, and beliefs rituals. This long and hereditary habit has become a tradition of the Sasak ethnicity today (Suparno, 2002).

One of the unique traditions of the Sasak people on Lombok island is coin-sowing. The coin-sowing tradition occurs during the *Aqiqah* event or in the Sasak language, called *Ngurisan* (trimming newborn babies' hair). The practice of coin-sowing has existed for years and continues to this day. Therefore, this study examines, first, the motivation of the Sasak Muslim community in carrying out such tradition until now. Second, the study analyzes the process of character-building embodied within the coins-sowing practice at the *Aqiqah* event in the Sasak community.

Method

The study of coins-sowing tradition is qualitative research using an ethnographic approach. The research was conducted in 2021 in the Sasak community at Lombok island West Nusa Tenggara Province. The data collection technique was performed through the following steps: first, observation of the coins-sowing tradition location at Sasak people in West Nusa Tenggara. Second, the study conducted several interviews with people directly involved in the event. Third, the writer documented all coins-sowing processes starting from the beginning of the event until the last event, coins-sowing. Subsequently, the writer conducts a thorough and comprehensive analysis of all prominent figures commenting on these coins-sowing events. In ethnographic research, data sources are taken from participants who are directly involved in the coins-sowing tradition. Participants in this study can be categorized into three categories. The first is the family that organizes and holds the coin-sowing ceremony, and the second tribal councils or community leaders who understand the traditional Sasak ethnicity. Third are community representatives who are involved in coins-sowing (Gall et al., 2003; Miles et al., 2014)

The data collecting method was conducted through observation, thorough interviews, and documentation in video, records, and photos; the subsequent step was to analyze the data. The data analysis was carried out through the following steps: first, described data or information in this study are the information or data related to the formulation of the problems above, which includes Sasak people's motivation to hold the coins-sowing tradition, the character-building values contained in such tradition. Second, grouping and coding the data conforming to the research formulation. The data of video and audio recordings stored earlier were examined carefully from the beginning until the end. The writer also makes the record transcription in narrative text, conforming to the speaker's speech and intention. The narrative text result of the recording is then commented on and edited according to the recording context. Third, the study drew a conclusion from the data analysis result referring to the research formulation of problems (Fraser 2004).

Result And Discussion

➢ **Process of Coins-sowing**

One of the Sasak people's traditions is coins-sowing (pennies). This tradition has been around for years and is practiced to this day by the Sasak people on Lombok Island. The first sowing event was conducted independently. This independent method means that the baby's parents or grandfather hold a *Ngurisan* event or trim the baby's hair. This event of trimming a baby's hair (*Ngurisan*) was carried out on the seventh day of the baby's birth date. The coins-sowing process is done by diffusing a certain amount of dime and penni (coins) over the place to put the money (*Nare*) mixed with yellow rice. In the coins vessel, they also put flowers and white thread. The coins-sowing process is carried out after the newborn's haircut (*Ngurisan*). H.M. Taesir, as the religious leader and tribal leader, states as follows:

> *"The coins-sowing tradition is an old practice that has been passed down from generation to generation among the Sasak people. The coins-sowing process is carried out as part of a newborn child (Ngurisan) cutting hair. After the newborn's hair cutting (Ngurisan) is finished, the baby's family representative will come out with a place to put the coins to take to the field and sprinkle the coins".*

At the hair-cutting (*Ngurisan*) event, the baby's parents invite religious leaders (*Tuan Guru/Kiyai*) to witness and lead the *Ngurisan* process. In addition to religious figures or

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leaders, the baby's parents also invite residents of the surrounding community, ranging from teenagers to adults. Shortly after the baby's haircut, the officer who brought the coin (*Nare*) went straight to the field to sprinkle the dime and penni along with the flowers or all of its contents (*Nare*). Immediately after throwing the coins up, all the children participating in the *Ngurisan* event took them, as shown in Figure 1 below. As stated by H. Abdus Syakur, who became one of the community leaders of West Lombok as follows:

> *"The interesting part about the Ngurisan process is the coins-sowing process itself. The children who are ready to wait in the field will fight over the change. The joy of the children fighting over these coins also brings happiness to the newborn baby's parents".*

Every village or area in Lombok conducts the coins-sowing at various events or celebrations. In East Lombok, the coins-sowing tradition is usually applied during weddings, hajj celebrations, etc. The term for ceremonial feast activity for the Sasak ethnicity is *Begawe*. Coins-sowing event is not only done during *Ngurisan*. They also conducted this tradition during the ceremonial feast event (*Begawe Belek*), such as a circumcision gratitude event for boys or the awaited children's newborn ceremony, as shown in picture 2 below. As explained by a Sasak community leader named H. Muhammad Kamil below:

> *"In this coins-sowing event, there are differences between one region and another, especially in events or activities in which the coins-sowing event is held. In some areas of East Lombok regency, for example, the coins-sowing event is held not only during the Ngursan event, but every time there is a Gawe Belek event, they continue to hold on to the coins-sowing event."*

The second process in the coins-sowing event is when cutting hair (*Ngurisan*) at sacred tombs. The *Ngurisan* or haircut, usually called *Aqiqah* in the second form, is held in sacred tombs. Among the sacred tombs are the Batu Layar Tomb, Bintaro Tomb, Loang Baloq Tomb, Cemare Tomb, and so on. The Sasak people believe these sacred tombs are the tombs of the Ulama or figures who were the first to spread Islam and have historical value on Lombok Island. As stated by West Lombok community leader H. Muhammad Supardi:

> *"Many Lombok people carried out haircuts or Aqiqah for their babies in sacred tombs such as this Cemare tomb. Mostly, they bring neighbors or all people in their neighborhood. They take one or two tour buses/cars. Some neighbors who were invited by those who held the event stayed around the Cemare tomb. In the evening, they will take a bath in the sea, reading Al-Barzanji, and some others just enjoy the exotic beauty of the Cemare beach in West Lombok."*

People who held the baby's haircut event and continued it with coins-sowing bring neighbors or people from the same village. The people's enthusiasm for the haircut ceremony is shown in Figure 4. A series of activities for residents to stay at the Cemare tomb close to Cemare beach and make bread (*Roah*) and drink coffee to establish closeness and friendship between them, as shown in Figure 3 below.

Figure 1. The Sasak people watch the coins-sowing after cutting the baby's hair (*Ngurisan*)
All photos by Authors

Figure 2. Children scrambling for coins after the baby's haircut (*Ngurisan*)
All photos by Authors

Figure 3. Eating together (*Roah*) and drinking coffee to strengthen good relationship
All photos by Authors

Figure 4. Sasak people who stay at the Cemare tomb close to Cemare Beach to participate
in the *Ngurisan* and coins-sowing
All photos by Authors

The meaning of Character-building
Educate Children to share

Through this coins-sowing event, from an early age, the child who is being cut/shaved is taught to care for fellow human beings. One form of caring for others is to give help, be generous, and put others first. As stated by one of the Sasak people, H. Abdullah follows:

"The habit of the Sasak people holding coins-sowing events is a means to train children to share. And it is hoped that through this activity, when children grow up, they can do good to anyone, including their parents."

Training children at an early age or even at newborn age to share is a good tradition. This sharing tradition will be helpful when they are growing up. Giving charity and sharing is an indispensable character-building education for children as adults. Sharing is a form of genuine concern in society. As stated by H. Wajedi as follows:

"that the coins-sowing event is a means to train children to share. The newly haircut child is trained to share so that when he grows up and has an income, he is accustomed to sharing with others. Because in the coins-sowing event, there are moral messages inside, the intention to train and educate children to have a social concern. This social concern will benefit the future of society."

The parents expect their children to be pious; it is the dream of all parents, especially the Sasak people. Among the characteristics of a pious child is that they are fond of giving or sharing with others. This sharing habit has been practiced since birth and will be ingrained into adulthood. The parents' good intentions are a character-building process for children from an early age. As stated by Mr. H. Zainal:

"Because as Muslims, in particular, we believe that whatever we do is known to Allah SWT, depending on our intentions. If we do this coins-sowing event, we intend the baby to later become a child with social concerns. The character of social concern that is desired in the event is through the coins-sowing, and by God's will, Allah will make the child has a high social care character."

Did not the Messenger of Allah (PBUH) say, "Seek knowledge from the cradle to the grave." So the author interprets the hadith ordering a father to teach his child from when he was in the womb until he died. So if the child is still in the mother's womb, they can already receive lessons, especially after birth, even though they are only one week old at *Ngurisan*. Therefore, what is done by coins-sowing at the newborn baby is education from an early age to share. At this time, by sharing, even though it is in the form of coins-sowing, it will be able to form a child's soul to care for others.

Educate Children to Work Hard

Children's education is indirectly applied in the coins-sowing tradition when cutting hair (Ngurisan). Children's enthusiasm for getting those coins is a process of educating children to work hard. The method of early education is suitable for building hard-working character in navigating their life to come. As stated by Ustadz Zaenudin that :

"Coins-sowing activities like this are in which there is an attempt to get some diffused pennies—children's efforts to get coins to have an indirect meaning of education. The children were excited and tried hard to win the coins. Efforts to get coins to teach children to work hard to get results."

In addition to practicing hard work, this tradition educates children to continue to be joyful and happy. This value shows that children are trained to always work hard in a cheerful and happy state so that work is fun and complete. As stated by Mr. Samsul as follows:

> *"When the children discover a baby's haircut (Aqiqah) event in their village, they flock to the house which holds the baby's hair cutting event. Each of them invites their friends to join the event happily and cheerfully. Because after the coins-sowing event is over, the kids feel joyful to get coins."*

After they got the coins, the kids who got the most coins gave their friends who did not get any. It teaches children to share with their less fortunate friends. Those less fortunate feel very happy to be shared by their friends. The friendship between them continues to grow and develop with happiness. As stated by Mr. Ahmad:

> *"The thing that is very interesting for the children in the baby's haircut event is the coins-sowing event. They are cheerful and cheer while fighting for coins. Those who get more coins give some to their friends who don't get it or only get a few coins."*

Islam teaches its people to work hard in fulfilling the necessities of life. Islam, as a religion believed to be true, teaches all human beings to always work professionally. In a hadith, it is mentioned

> *"Work for your worldly interests as if you will live forever and work for your hereafter as if you will die tomorrow morning."*

The hadith contains two moral messages related to human life. At this point, both lives require as much provision as possible through hard work. The two lives mentioned in the hadith are, first, the worldly life is a parable of a long life, even in the language of the hadith above using the term *Abadan*. Eternal life means forever. Therefore, living in this world, people must work hard according to their individual skills, expertise, and professions. In other words, in order to meet the needs of life in the world, one is strictly forbidden to sit idly by or be lazy. Second, the life of the hereafter is the same. The life of the hereafter, which is eternal in nature, requires readiness and more provisions, and the only provision most useful in the afterlife is piety. Allah SWT's word in the Qur'an Surah al-Baqarah verse 197: *"so make provision, for surely the best of the provision is (to be the owner of) piety."* In another verse, Allah SWT says: *"O you who have believed, fear Allah. And let every soul look to what it has put forth for tomorrow (hereafter) – and fear Allah. Indeed, Allah is Acquainted with what you do*. (QS. Al-Hasyr:18)

Strengthening good relationships among the people

The coins-sowing tradition is part of the *Aqiqah* or *Ngurisan* event. The *Aqiqah* or *Ngurisan* event is a celebration or feast that invites many community members. Every celebration event (*Ngurisan*) invites all young people, older people, and even children. They gather before or pre-celebration event. They gather to help families who hold the event to cook the food served for guests and so on. the meeting of all community members in one village can strengthen the good relationship among them. As expressed by Mrs. Atik:

> *"If a community member has a celebration, whether an Aqiqah event or a newborn child's haircut, then the closest community member helps prepare and cook the food. They helped the event from start to finish, the Ngurisan event and the coins-sowing. They are happy because there is closeness, strengthening their good relationship among the residents."*

COINS-SOWING TRADITION

The activity of gathering together to help community members who have *Ngurisan* and other celebrations is called *Betulung* (Mutual help/support each other) in the Sasak language. This *Betulung* activity is a mutual help activity among the Lombok people in carrying out celebrations, whether it's Aqiqah celebrations, wedding celebrations, or other celebrations. The exciting thing about the *Betulung* activity is that the host provides breakfast, lunch, dinner, and coffee as much as they like. They chatted for as long as they wanted. While enjoying food and drinking coffee, they create a strong bond between the villagers, as stated by Ustaz Zainuddin as follows:

> *"Betulung tradition (helping each other) in every activity within the community for those who host the ceremony is a long-time practiced tradition. The interesting part about the Betulung activity is that the host provides food and drinks coffee as much as they want while working and chatting with each other. This Betulung activity makes the community establish a closer bond, and there is a strong relationship among residents."*

Familiarity exists when people gather according to their age. Old folks gather with older people, and the younger ones talk and work with their friends. The women gather together with women and mothers, and the kids play with other kids. The gathering of community members according to their age shows chumminess in the age group so that the chat is age-appropriate and happy. As expressed by Mrs. Hj. Jukranah as follows:

> *"People gather according to their age. The young ones gather around with their peers, and the fathers chat with fellow men. They enjoy food and drink coffee while working and chatting according to their age. Women also gather around with other women. This tradition makes familiarity and good relationships continue to exist between members of the community".*

In this context, Islam strongly encourages a Muslim to attend the invitation of another Muslim, and it is one of the five rights of a Muslim. Some of them sit in groups of young fellows who are in charge of skinning coconuts and banana trees. At the same time, the old group is in groups and tasked with cleaning the banana stem feathers that have been cut into pieces (in the Sasak language, it is called *Ares*). At the same time, the female residents gather in one place to help make snacks that will be served to the male guests and invitees who attended the *Betung* event.

Character education can be internalized indirectly in the activities of cultural traditions in society. Among the character education that appears in everyday life are telling the truth, trusting, keeping promises, not lying, respecting elders, loving the young, doing good to others, being responsible, and so on. Education to care for others or strengthen connections among citizens can support the societal and state foundations. Song or music traditions can form the character of love for others (Aisyah, 2018; Ratih et al., 2020).

The latest research on character-building taught from an early age in the Sasak tradition, *Peraq Api*, has been studied by Nuruddin (2022). This study uses an ethnographic approach to the Sasak tribe. His research results report that character-building values in the *Peraq Api* tradition include religiosity, responsibility, good ethics, and care for the surrounding environment. Many researchers explain the media as a way to establish character-building; among the ways to develop a good character in a child is through sharing programs, as reported by Rejeki (2020). Individuals can make sharing programs or through social institutions. The habit of sharing is very good for training children from an early age to care for fellow human

beings. as well as intermediaries through educational programs on the meaning of life (Apriani & Sari 2020), through the learning process of cultural history or the past that becomes a role model for the younger generation (Diansyah & Magdalena 2019)

Study related to culture or tradition within a community has been investigated from the perspective of instilling a character-building process. The cultural tradition of a community can be taken as a good learning source, indirectly or directly (Anggraini & Tuti, 2017). Character education has been widely viewed from the perspectives of cultural values, cultural character, and the relationship between humans in society. Hence, cultural traditions can build character education in the community (Guseynov, 2017).

➢ **Religious Motivation (Grateful for the blessings of Allah SWT)**
Some members of the Sasak community, including the Muslim community of the Sasak tribe, in carrying out the coins-sowing practice, sometimes do not care about the government's call to keep their distance or stay away from crowds to maintain mutual safety. Coins-Sowing is a part of charity activity. Sharing sustenance with children is a form of charity taught by religion, especially Islam. It is hoped that multiplying alms will keep away various kinds of diseases. As stated by Amaq Amin:

> *"According to most of the Sasak people, the implementation of the sowing of money, which brings in some people and causes a crowd of community members, especially children, to fight over the money sown, does not mean that they are against the government's call, but rather as an effort to resist evil or disease."*

The tradition of sowing money driven by religious motivation is contained in various verses from the Qur'an or Al-Hadith. This culture parallels religious orders, as stated in one of the hadiths of the Prophet Muhammad. As follows :

> *" Charity can prevent bad death."*

Based on the hadith above, they are increasingly convinced that by giving charity, they will be protected by Allah SWT from all kinds of plagues, including the corona outbreak, which is currently viral and is becoming a trending topic in all mass media, both print and electronic.

Related to the Muslim community motivation of the Sasak ethnicity to hold a coins-sowing ritual is an embodiment of pleasure and gratitude to have offspring. The birth of a baby or offspring is a gift to be grateful for. One of the ways to be grateful is by giving to charity. as the researcher interviewed a community leader named Lalu Muchsin Efendi, who said:

> *"We held a coins-sowing event after the baby's haircut (Ngurisan) was over as a sign of gratitude. A form of gratitude for getting grandchildren who are the family's dream and hope. Because I myself am 80 years old, and this is my first grandchild from my second child because my first child died when he was 25 years old. So with the presence of a grandson in our family, I personally feel delighted and grateful to Allah SWT".*

The tradition of coin-sowing is part of a series of baby hair-cutting events (*Ngurisan*), which in Islam, it is called *Aqiqah*. The feeling of gratitude to have a child or to have a grandchild is joyful. Therefore, the order to hold *Aqiqah* is continued with coins-sowing activity as a charity. Aqiqah activity is an order in Islam. As stated by Mr. Abdul as follows:

"As a manifestation of our joy and gratitude as parents or grandfathers, we are the ones who bear all the costs for my grandson's Ngurisan, including the dime and penny that were sown to those kinds; although it is not much, we did our duty. In addition, the Ngurisan command in Islamic terms is Aqiqah, one of the religious recommendations that must be implemented."

Concerning this *Aqiqah* or *Ngurisan* command, there are several hadiths as the references, including:
"From Samurah bin Jundub (may Allah be pleased with him) said, verily the Messenger of God, may God bless him and grant him peace, said, "Each child is pledged with his Aqiqah that is slaughtered on the seventh day, cut their hair, and given a name" [HR. At-Tirmidzi].

When *explaining* the words of the Prophet (may Allah grant peace and honor to him), which means, "Every child is mortgaged with his Aqîqah," Imam Ahmad (may God have mercy on him) said that he told to be withheld from interceding for his parents if he died when he was still young. So it is described as similar to not releasing the pawn stem from the holder. This shows the obligation of *Aqîqah*. In another hadith, it is explained as follows:
"From Salman bin Amir, may Allah be pleased with him, he said, "I have heard the Messenger of God (may Allah grant peace and honor to him) say: Every male baby is with his aqîqah, so slaughter an animal and remove any disturbance from him." [HR. Al-Bukhâri].

In other *hadith*, it is explained that the command to hold Aqiqah is as follows:
"From Salman bin Amir, may Allah be pleased with him, he said, "I have heard the Messenger of God (may Allah grant peace and honor to him) say: Every male baby is with his aqîqah, so slaughter an animal and remove any disturbance from him." [HR. Al-Bukhâri].

The primary motivation in this coins-sowing tradition is to be grateful to the Almighty Creator for being given offspring. This form of gratitude is implemented in the Aqiqah celebration activity (*Ngurisan*) coupled with the coins-sowing tradition. Many studies show that motivation is very decisive in the sustainability of a practice. The motivation to preserve local culture can foster a love for the tribal and cultural traditions themselves, as conveyed by Iswatiningsih (2019). The religious reason is closely related to the noble nature of the prophets, which parents want to instill from early childhood. The noble character traits are always telling the truth, holding trust, conveying the truth, and being intelligent (Ismail, 2020). Noble behavior is the behavior that continuously wants to learn to process for the better. Character-building motivated by religion is a process of basing all actions on religious or religious standards (Narulya et al., 2017).

Sobry and Teti (2021) also reported religious motivation in people's visits to the sacred tombs of the Sasak ethnicity at Lombok Island. The form of gratitude for the Sasak community is to visit sacred graves because Allah bestowed them with good health and the opportunity to perform the pilgrimage. The character lessons learned during this visit to the sacred tomb are practicing clean living, reminding stories of heroism, establishing Muslim relationships, and remembering death. Likewise, religious motivation in pilgrimages or spiritual journeys provides many life lessons that are always remembered (Thomas et al.,2018).

Direct learning in the religious journey is an opportunity to improve themselves for the better in the future (Geertz, 1966).

Conclusion

The tradition of coin-sowing is a unique tradition in the Sasak ethnicity at Lombok Island, West Nusa Tenggara, Indonesia. This tradition is a popular tradition among the Sasak people. They like it, especially children because they scramble and fight over the coins diffused by the host after a newborn baby's haircut (*Ngurisan*) or Aqiqah event. This research result indicates that the motivation behind this tradition of coin-sowing continues and is carried out by the community to this day is the high religious motivation. This religious motivation is a kind of gratitude to Allah SWT, the Almighty Creator, for bestowing their offspring. A form of deep appreciation for being given offspring where the baby is born healthy and safe. Second, the values of character education contained in the tradition of sowing coins are to instill character from an early age in children how to share with others, instill the character of hard work and maintain a good relationship. The drive of religious motivation and good character values in this coins-sowing tradition has made such custom sustainable to this day.

References

Anggraini, P., & Tuti, K. (2017). Character and local wisdom-based instructional model of Bahasa Indonesia in vocational high schools. *J. of Edu. and Practice*, 8(5), 23-29.

Annurua, Q.A. & Nurani, F. (2019), 'Tanggung jawab dalam menjaga persatuan dan kesatuan bangsa Indonesia', *Jurnal SSBI Universitas Brawijaya* 1, 1–5.

Anriani, H. B., Sari, H., & Junaidi, H. (2022). Investigating the relationship between moral and ethical: Does extrinsic and intrinsic religiosity improve people's mental health?. *FWU Journal of Social Sciences,* 16 (3), 52–67. http://doi.org/10.51709/19951272/Fall2022/4.

Arifin, Bafadal, I., Imron, A., & Sonhadji A. (2017). Cultivating character education through transforming school cultural values. *Studia Humanitatis*, 37(4), 1-18.

Asa, A.I. (2019), 'Pendidikan karakter menurut ki hadjar dewantara dan driyarkara', *Jurnal Pendidikan Karakter* 9 (2). https://doi.org/10.21831/jpk.v9i2.25361.

Atmajawati, Y., & Hening, W. U. (2018). Learning method, school environment, leadership and its effect on quality education and the excellence student character at muhammadiyah high school. *Journal of Education and Practice*, 9(26), 118-123.

Aisyah, E.N. (2018). 'Internalisasi Nilai Karakter Nasionalisme melalui Dongeng dan Tari (DORI) bagi Anak Usia Dini', Golden Age: *Jurnal Pendidikan Anak Usia Dini* 2(2). https://doi.org/10.29313/ga.v2i2.4293

Apriani, A. & Sari, I., P. (2020). 'Penguatan karakter nasionalisme generasi alphamelalui living values education program (LVEP)', *Literasi Jurnal Ilmu Pendidikan* 11(2), 67–69. https://doi.org/10.21927/literasi.2020.11(2).67-79

Budiwanti, E. (2000). Islam Sasak wetu telu versus waktu lima. Yogyakarta: LKiS.

Busro, B. & Qodim, H., (2018). 'Perubahan budaya dalam ritual slametan kelahiran di cirebon, Indonesia', *Jurnal Studi Agama Dan Masyarakat* 14(2),127. https://doi.org/10.23971/jsam.v14i2.699.

Bria, M., E. (2018). 'Penguatan semangat nasionalisme di daerah perbatasan melalui pendidikan kewarganegaraan berbasis kearifan lokal', *Jupiis: Jurnal Pendidikan Ilmu-Ilmu Sosial* 10(1), 38–43. https://doi.org/10.24114/jupiis.v10i1.8379.

Chatathicoon, S., Thinwiangthong, S., and Ya-amphan, D. (2022). Early Childhood Cooperative Behaviors through HighScope Approach in Thailand. *FWU Journal of Social Sciences*, Spring 2022, Vol. 16, No.1, 1-18. http://doi.org/10.51709/19951272/Spring2022/1.

Dulmanan, A.A. (2020). 'Multikulturalisme dan Politik Identitas: Catatan Reflektif atas Gagasan Politik Will Kymlicka', *Muqoddima Jurnal Pemikiran Dan Riset Sosiologi* 1(1). https://doi.org/10.47776/MJPRS.001.01.03.

Diansyah, A. & Magdalena, M. (2019). 'Implementasi nilai karakter nasionalisme melalui pembelajaran sejarah materi pendudukan jepang di indonesia di sma swasta budisatrya medan kelas Xi T.A 2018/2019', *Puteri Hijau : Jurnal Pendidikan*

Farida, S. (2016). 'Pendidikan karakter dalam prespektif kebudayaan', *Kabilah* No. 1(1).

Fraser, H. (2004). 'Doing narrative research,' *Qualitative Social Work*. 3(2), 179–201. https://doi.org/10.1177/1473325004043383

Gall, M.D., Gall, J.P. & Borg, W.R. (2003). Educational Research, Boston, MA: Pearson Education, Inc.

Guseynov, A. (2017). Pervaya Filosofiya Kak Nravstvennaya Filosofiya [The First Philosophy as The Moral Philosophy] Voprosy Filosofi, 7, 66-74.

Geertz, C. (1966) Religion as a cultural system, in M. Banto (Ed.) Anthropological approaches to the study of religion, New York, NY: Praeger, 1–46.

Hidayah, A. (2017). 'Makna budaya lagu dolanan: Dhondhong apa salak, gundhul pacul', *Jurnal Penelitian Humaniora* 18(1), 19–26. https://doi.org/10.23917/humaniora.v18i1.3637.

Hayati, A.N. & Usriyah, L. (2020). 'Implementasi pendidikan karakter untuk siswa madrasah ibtidaiyah menurut Abdul Majid dan dian andayani', *Akselerasi: Jurnal Pendidikan Guru MI* 1(1), 47–61. https://doi.org/10.35719/akselerasi.v1i1.5

Iqbal, M.Z., & Akram,H., (2020). Role of Sekolah Islam and pesantren in nation building of Indonesia: An analysis of the perception of alumni. *FWU Journal of Social Sciences*, 14(4), 93–104.

Iswatiningsih, D. (2019). 'Penguatan Pendidikan Karakter Berbasis Nilai-Nilai Kearifan Lokal di Sekolah', *Jurnal Satwika* 3(2), 155–164. https://doi.org/10.22219/satwika.v3i2.10244

Ismail, I. (2020)., 'Pendidikan Karakter Berbasis Religius', *Jurnal Al-Qalam: Jurnal Kajian Islam & Pendidikan* 7(1). https://doi.org/10.47435/al-qalam.v7i1.182

Komalasari, K., & Saripudin, D. (2018). The influence of living values education-based civic education textbook on student's character formation. *International Journal of Instruction*, 11(1), 395-410. https://doi.org/10.12973/iji.2018.11127a.

Komara, E. (2018). 'Penguatan pendidikan karakter dan pembelajaran abad 21', *SIPATAHOENAN: South-East Asian Journal for Youth, Sports & Health Education* 4(1).

Khairiah, K. & Walid, A. (2020). 'Pengelolaan keberagaman budaya melalui multilingualisme di Indonesia', *Fikri: Jurnal Kajian Agama, Sosial Dan Budaya* 5(1).

Manan, A. (2019). 'The ritual of first infant bathing in Aceh: An ethnographic study in West Labuhan Haji, South Aceh,' *Journal of Contemporary Islam and Muslim Societies* 3(2). https://doi.org/10.30821/jcims.v3i2.5466

Melalatoa, J.M. (1997). Sistem Budaya Indonesia, Kerjasama FISIP Universitas Indonesia dengan PT, Pamator, Jakarta.

Miles, M.B., Huberman, M. & Saldana, J. (2014). Qualitative data analysis: A methods sourcebook, New York, NY: Sage Publication, Inc.

Nuruddin, N. (2022). 'Character education in the tradition of peraq api in the community of Sasak, Lombok, Indonesia', *HTS Teologiese Studies/Theological Studies* 78(4), a7534. https://doi.org/10.4102/hts.v78i4.7534.

Savucu, Y., Kanat, M., Karadağ, M., Süreyya. Y., Sezer, & Ali S. Yücel. (2017). Analysis on the bullying tendencies and value preferences of high school students according to level of receiving physical education and sports course. *International Education Studies,* 10(7), 40-47.

Suwondo, B. (1994) History of West Nusa Tenggara, Jakarta: Dinas Pendidikan dan Kebudayaan.

Suparno, B.D. (2002). Inter-ethnic marriage in the process of social integration and its implications for regional resilience, Thesis, Gajah Mada University.

Suyatno, Jumintono, Pambudi, D. I., Mardati, A., & Wantini. (2019). Strategy of values education in the Indonesian education system. *Int. J. of Instruction*, 12(1), 607-624.

Rambe, Linda Sari, Deny S., & Anita Y. (2018). Design of character education model in learning civics at state primary school number. *J. of Edu. and Practice*, 9(3), 58-65.

Ratih, K., Srijono, D., Laksono, G.Y., Dewi, A.K., Jusup, B., Fitriyani, F. (2020). 'Penguatan nilai dan karakter nasionalisme melalui lagu wajib nasional di MI muhammadiyah tanjungsari, boyolali', *Buletin KKN Pendidikan* 2(2), 75–78.

Rejeki, H.W.(2020). 'Membangun nilai karakter gotong royong dan kerjasama melalui kegiatan gemar berinfak sebagai wujud nasionalisme dalam kehidupan sekolah', *Wahana* 72(1), 71–79. https://doi.org/10.36456/wahana.v72i1.2356.

Subki

Soemarmi, A. & Diamantina, A. (2019). 'Konsep negara kepulauan dalam upaya perlindungan wilayah pengelolaan perikanan Indonesia', *Masalah-Masalah Hukum* 48(3), 241–248. https://doi.org/10.14710/mmh.48.3.2019.241-248.

Sobry, M., and Purnamasari, T., I. (2021). "Motivation and Experience of Sacred Tomb Pilgrimage: Learnings from the Sasak Tribe Lombok," *International Journal of Religious Tourism and Pilgrimage*: Vol. 9: Iss. 4, Article 8. doi:https://doi.org/10.21427/07B2-EF17.

Thomas, S., White, G.R.T. & Samuel, A. (2018). To pray and to play: Post-postmodern pilgrimage at Lourdes, *Tourism Management*, 68, 412–422.

Wijoyo, S. (2021). 'Pelaksanaan misi allah dalam konteks keberagaman budaya di indonesia', Huperetes: *Jurnal Teologi Dan Pendidikan Kristen* 2(2). https://doi.org/10.46817/huperetes.v2i2.65

Wigunadika, I.W.S.(2018).Pendidikan karakter berbasis kearifan lokal masyarakat bali', *Jurnal Society 2*.

Designing and Implementing of a Learning Management Process for Enhancing Health Literacy among Nursing Students: An Application of Design-Based Research

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The research objectives were: to design and develop a learning management process to enhance nursing students' health literacy by applying the social cognitive theory with design-based research; and 2) to study the post implementation results of the learning management process on health literacy among nursing students. The sample consisted of 60 undergraduate nursing students. The research instruments included the use of learning management plans based on the social cognitive theory with design-based research; and the health literacy of the nursing student's scale. The data was analyzed utilizing descriptive statistics, Hotelling T^2, and MANCOVA. The findings were: 1) the learning management processes to enhance the health literacy of nursing students by applying design-based research consisted of five steps: (i) learning and understanding of self and others, (ii) inquiry and exchange, (iii) consideration and decision making, (iv) modifying the actions, and (v) reflections and transfers; 2) The health literacy scores of nursing students in the experimental group after intervention were significantly higher than for the control group at a level of .05 and the health literacy scores of nursing students in the experimental group on the posttest after manipulation were significantly higher than for the control group at.05 .

Keywords: design-based research, health literacy, learning management, nursing students, social cognitive theory

The rapid social, political, economic, technological changes and also the pandemic are currently affecting the health of the population and might lead to health risks, sickness and non-communicable diseases that people can protect themselves if they illustrate health promoting behaviors and take chance of the ability to access, understand, and implement health information to make their health and well-being better (Bhutani & Bhutani, 2014; Yusefi et al., 2022). A lot of empirical evidence has been found to indicate the important factor contributing to people having literacy is education (Webb & Williams, 2018). On the other hand, education is not the only one factor to ensure that people have enough skills or literacy to access, understand, and implement health information to make themselves healthier and have a better well-being (WHO, 1998). Therefore, health literacy can be defined as significant health issue that many countries across the world are starting to give priority to (Trezona, Rowlands & Nutbeam, 2018).

The development of the health literacy of people for the strengthening of human potential and well-being is an essential solution to solve the health problems directly and it is also considered a sustainable solution that is recognized worldwide (Kaeodumkoeng, 2018;

Nammontri, 2018). Nutbeam (2000) stated that the concept of health literacy was a new part of health promotion. The concept of health literacy can also be defined as ensuring that the people who are targeted, possess the relevant cognitive and social skills to deal with accessible healthcare services, are able to understand and are well-educated on health media, possess self-management skills, and have the skills to interpret health-related issues and make appropriate decisions based on them (Nutbeam, 2008).

Healthcare providers are one category of people for who it is deemed necessary that they encounter an enhancement in their health literacy because the healthcare providers who have health literacy can share the health information with other people and encourage them to implement it, protect themselves, and care for their health effectively (Voigt-Barbarowicz & Brütt, 2020; Voigt-Barbarowicz et al., 2022). Registered nurses can be defined as one type of main healthcare providers who work closely with people in both normal and abnormal health conditions. The scope of the health and nursing practice covers individual, family and community level care across primary, secondary and tertiary health care centers. The registered nurses might be one of the most important healthcare providers who be able to are able to develop the health literacy among people and older adults to make their health better (Tachavijitjaru, 2018; Smith et al., 2022). Therefore, it is essential to include health literacy issues in the nursing curriculum, as through learning and teaching the nurses, from the time they start as nursing students, they can foster awareness and encourage health literacy among them (McCleary-Jones, 2016).

Nursing education is the beginning point for professional nurses in the nursing practice because they receive a schooling from an educational institute that trains nursing students to have the knowledge, skills and various professional experiences required for the nursing industry including attitudes they should depict towards the nursing profession and healthcare service recipients. With regards to the learning processes of nursing students, it is imperative that the Bachelor of Nursing Science program should offer training to learners to develop their critical thinking abilities as well as their self-management skills to be able to use and apply them to the nursing practice to take care of the healthcare service recipients, and provide health education to patients or any healthcare service recipients (Chung & Prato-Lefkowitz, 2015) which includes encouraging people to gain health literacy and offering access to healthcare service recipients who have low health literacy (Nammontri, 2018). Moreover, the training of nursing students that focuses on teaching the students the skills of using tools to assess people's health literacy is also an important aspect that should be included in the teaching and learning of nursing students to enable the students to use these tools for the assessment of patients after they have registered as registered nurses (Kennard, 2016; Smith et al., 2022).

Therefore, registered nurses should enhance their health literacy from being a nursing student onwards (Sarnkhaowkhom & Suwathanpornkul, 2021). If nursing schools are able to develop professional nurses into people with a high level of health literacy from the moment they are nursing students through training and including health literacy issues into the teaching, learning and practical experiences, the registered nurses will have the skills, awareness of health literacy and the ability to be a vital force in the healthcare profession to solve today's major health problems of low health literacy among people (Johnson, 2014; Johnson, 2015) However, the empirical evidences shows that 30.2 percent of health science students, or an overall mean of 36.52 ± 7.73), had inadequate or limited health literacy (Rueda-Medina et al., 2020). Moreover, when looking at the level of health literacy among nursing students, their

health literacy was classified as limited in health literacy due to a lack of clinical experiences to practice their communication skills and health literacy assessments (McCleary-Jones, 2016). This was related to Williamson & Chopak-Foss's (2015) that indicated senior nursing students had insufficient knowledge and experiences of health literacy. This is the major reason why the nursing students as registered nurses of the future should be concerned about increasing their health literacy levels (Saunders et al., 2019; Holt et al., 2020; Vamos et al., 2020; González-López & Rodríguez-Gázquez, 2022).

Accordingly, the researchers were interested in designing and developing a learning management process to enhance the health literacy of the nursing students by applying the social cognitive theory of Bandura (1977; 1986). The theory focuses on the internal changes of people's behaviors across personal, behavioral and environmental aspects that are considered as reciprocal determinism though the three learning methods (i.e., observation, self-efficacy and self-control) that can result in good results or understandings. In this study, the social cognitive theory of Bandura (1977, 1986) consists of the three factors (i.e., personal, behavioral and environmental factors) and the three learning methods (i.e., observation, self-efficacy and self-control) for learning activities. Design-based research (DBR) was used as the base for designing the activities during the study and when studying the results from the learning management process to enhance the health literacy of the nursing students (Peterson & Herrington, 2005; Christensen & West, 2018; Kaanklao & Suwathanpornkul, 2020). The covariate variable was the pre-existing level of health literacy in the sampled subjects of Khumthong (2016); Torres and Nichols (2014) Mullan et al., (2017) concluded that the students with different levels of existing health literacy had different levels of health literacy after seeing an improvement in their health literacy levels. The foundation of the existing health literacy was the factor causing the different levels of health literacy. Consequently, the learning management process was designed and improved based on the unique contexts of the nursing students and also determined to generated new findings either new learning management process which was adjusted during and after implementation of prototypes along with the purposes of the design-based research (DBR) to enhance the appropriateness of the specific context i.e., nursing students or generated new interesting finding which is the effectiveness of the intervention that differed from previous studies as they focused particularly on the effectiveness of intervention. This was done by health care providers or professionals who were from the target population and focused on developing the health literacy in order to improve the health literacy levels of the nursing students by actually promoting and developing their health literacy.

The objectives of this research were: 1) to design and develop a learning management process to enhance health literacy among undergraduate nursing students by applying the social cognitive theory with design-based research; and 2) to study the results from the implementation of the learning management process to enhance health literacy among undergraduate nursing students by applying the social cognitive theory. The conceptual framework of this study has been depicted in figure 1 below.

Figure 1

Conceptual Framework

(Bandura, 1977; Bandura, 1986; Peterson & Herrington, 2005)
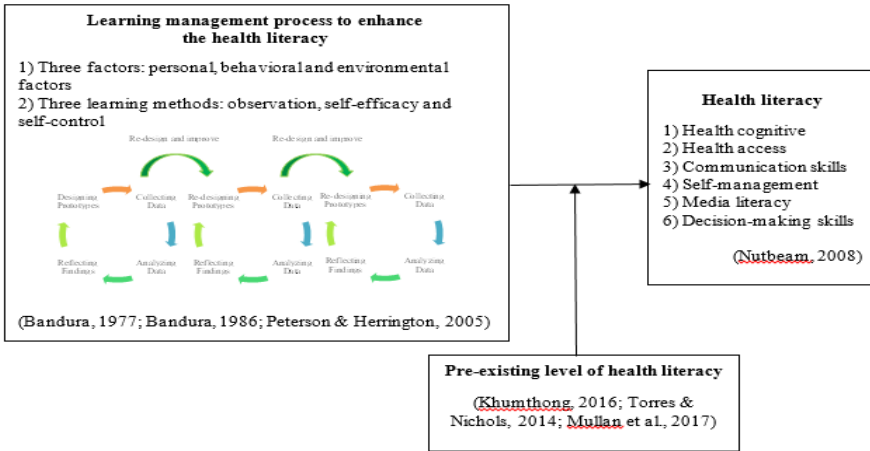
Methods

This study was completed through design-based research consisting of two phases. The first phase included the design and development of the learning management process to enhance the health literacy of nursing students by applying the social cognitive theory. The second phase was the studying of the results of using the learning management process.

Sample

The population sample for this study consisted of second-year students from the Bachelor of Nursing Science program at the Faculty of Nursing of Saint Louis College, who were second- year students in the second semester of the academic year of 2019. The sample comprised of 60 second year nursing students selected by using the simple random sampling method. The sample size was specified by using G*Power Version 3.1.9.2 which helped calculate the appropriate sample size. The effect size was specified based on a study by Borrero (2018), with the effect size being 1.08 for this project. As a result, the total size sample size was 60 nursing students of which 30 students belonged to the experimental group and 30 belonged to the control group. Matched pairs were applied when comparing two groups that had very similar characteristics. These similar characteristics included gender, age and the grade average point (Torres & Nichols, 2014). The groups consisted of Group 1 and Group 2, of which one was the experimental group, and the other was the control group. In this study, the control group was a passive control group due to this study was developed under the special activities of the nursing curriculum which not determined to compared with other curricular activities or intervention.

The characteristics of the samples were analyzed by using descriptive statistics including the frequency, percentage, mean and standard deviation for three variables consisting of gender, age and the grade average point as aforementioned. Most of the nursing students who were included in the learning management process implementation were female. The percentage of female students was 96.7%, and that of the male students was 3.3%, respectively. By considering their ages, it was found the average age of the students in the experimental group was 21. Most grade average points were 3.01 – 3.50 (40 percent). Most of the students in

the control group were female. The percentage of the female students was 96.7%, and that of the male students was 3.3%, respectively. By considering their ages, it was found the average age of the students in the control group was 20.77. Most grade average points were 3.01 – 3.50 (40 percent) as shown in Table 1.

Table 1

Characteristics of the Experimental and Control Groups

Characteristics		Group				Total	
		Experimental		Control			
		N	%	N	%	N	%
1. Gender							
1) Male		1	3.3	1	3.3	2	3.3
2) Female		29	96.7	29	96.7	58	96.7
	Total	30	100	30	100	60	100
2. Grade Point Average (GPA)							
1) less than 2.00		0	0	0	0	0	0
2) 2.00 – 2.50		6	20	4	13.3	10	16.7
3) 2.51 – 3.00		11	36.7	13	43.4	24	40
4) 3.01 – 3.50		12	40	12	40	24	40
5) 3.51 – 4.00		1	3.3	1	3.3	2	3.3
	Total	30	100	30	100	60	100
		M	*SD*	*M*	*SD*	*M*	*SD*
3. Age		21.00	1.84	20.53	1.46	20.77	.21

Data collection and analysis

The learning management process was designed and developed by the researchers and implemented with the randomized control group pretest posttest design (Leedy & Ormrod, 2013; Suwathanpornkul, 2020). The experiments were conducted in the second semester of the academic year of 2019 from March to April 2020, during which six experiments were conducted, which lasted for six hours. The total time it took for the researcher to conduct the experiments was 36 hours. The prototype for the learning management process that was designed and developed by the researchers from the first phase was implemented in the experiments and adjusted during the research period.

There were two types of research instruments: (1) The prototype of learning management plans to enhance the health literacy of the nursing students that applied the social cognitive theory following the design-based research approach, and (2) the health literacy of the nursing student scale developed by the researchers which covered three types of questions, which were focused on; the demographic data, 30 multiple choice questions, and 48 questions with five rating scales answers. The prototype of learning management process was verified and validated the appropriateness by five experts which indicated the details in the prototype development section below. For the content validity of the health literacy of nursing students scale was checked by five experts, who discovered that the index of the item objective congruence (IOC) was 0.60 - 1.00. The scale was tried out with 40 nursing students in order to come up with the difficulty index (p) that came out as 0.38 - 0.80 and the discrimination rates (r) were 0.20 - 0.73. The discrimination rates from the total item correlation came out as 0.22 - 0.80. The reliability was examined with Cronbach's alpha coefficient and showed results of 0.84 - 0.92.

The scores from the assessment of health literacy were analyzed by using descriptive statistics (i.e., frequency, percentage, average and standard deviation), Hotelling T^2, and the

multivariate analysis of covariance (MANCOVA) which the foundation of the existing health literacy was the factor causing the different levels of health literacy (Khumthong, 2016; Torres & Nichols, 2014; Mullan et al., 2017).

Prototype development
Prior to designing and developing the learning management process to enhance the health literacy of nursing students by applying the social cognitive theory in the first phase, a prototype of the learning management process was designed and developed by the researchers. The documents and studies related to promoting the health literacy, the social cognitive theory, and the design-based research were reviewed and studied by the researchers in order to synthesize the documents, after which they applied the synthesis results to the social cognitive theory to develop the prototype of the learning management process. The learning management plans were also developed as subcategories of the learning management process by applying the social cognitive theory of Bandura (1977; 1986) that consisted of the three factors (i.e., the personal, behavioral and environmental factors) and the three methods (i.e., observation, self-efficacy and self-control) from the prototype.

The results from the mixed methods research synthesis (MMRS) with regards to the related pieces of literature were applied to the design of the learning management process by applying the social cognitive theory (Sarnkhaowkhom & Suwathanpornkul, 2020; Sarnkhaowkhom & Suwathanpornkul, 2021). The prototype of the learning management process consisted of the six following steps; (i) the first step was the "observation of self and others" step. The students mutually discussed observing themselves and their surrounding people or role models regarding their health across the personal, environmental and health behavior aspects. This involved the process of learning from observations, experiences of others as well as self-observations; (ii) the second step included the "learning and understanding" step. The students mutually tried to understand and learn about their own personalities, their surrounding people's or role models' personalities, their environments and own health behaviors as part of the memorization process and how the experiences of these people are applied to their successes; (iii) the third stage comprised of the "inquiry and exchange" step. The students must mutually inquire about and exchange information from their observations, and they must learn and understand the information from the previous steps with regards to the personal, environmental and health behavior aspects. The actions and words covered in the observations from their personal, environmental and health behavior aspects were used to encourage the learning and receiving of the health information among students; (iv) the fourth step consisted of the "consideration and decision making" phase. The students considered the information and made decisions based on the acquired health information regarding the personal, environmental and health behavior aspects. This decision-making step led to the next step; (v) the fifth step was the "modifying the actions" step. After the students had considered the information and had made their health decisions in the previous step, in this step, the students would change their actions, motivations, and emotional stimulation with regards to the personal, environmental and health behavior aspects after making their decisions; and (vi) the sixth step included the "reflections and transfers" step. This step was the last step in which the students looked back at their motivations, emotional stimulations, and reactions to reflect on their health actions across the personal, environmental and health behavior aspects.

Once these steps were completed, the aforementioned design of the learning management process was used for the specification of the sub-topics for each learning

management unit relevant to the provided definition of health according to the concepts of Brook et al., (1979) and WHO (1998) who stated that health is the physical, mental and social fitness of a person without any disease or disability. This led to the creation of a learning management unit named "Nursing Students with Health Literacy". It consisted of three sub-units: Sub-Unit 1 – Physical Fitness, Sub-Unit 2 - Healthy Mind, and Sub-Unit 3 – Good Society. Each sub-unit consisted of six learning management plans. The total number of plans was eighteen.

The prototype for the learning management process was verified and validated by five experts (two nursing education experts and three health literacy experts) who focused on the following issues: (1) the components of the learning management process, (2) the learning topics, (3) the objectives of the learning management process, (4) the learning content, (5) the learning management plan, and (6) the learning materials. The results, after an evaluation of the appropriateness of the prototype by the experts, were interpreted. There were then amendments and improvements made based on their suggestions and opinions by piloting it in with the samples. During the implementation, the reflections from the learning management process were used by the researchers for the purpose of revising the learning management process. There were also discussions held with researchers, experts and instructors of the Bachelor of Nursing Science program in order to improve the learning management process to achieve a greater focus on the actual and specific contexts the nursing students taking part in the study had to face.

Ethical consideration

This research was conducted after approval of the ethical review committee. Informed consent was obtained from participants prior to participation in this research. This research was approved by the Human Research Ethics Committee of Srinakharinwirot University (SWUEC-G-115/2562X) and the ethical committee of Saint Louis College (Code: E.022/2562).

Results

1. The designing, adjusting and developing of the prototype for the learning management process consisted of the following six steps in the beginning: (i) observation of self and others, (ii) learning and understanding, (iii) inquiry and exchange, (iv) consideration and decision making, (v) modifying the actions, and (vi) reflections and transfers. During the mentioned learning management process, the process was designed, improved, revised and developed based on the contexts and real experiences of the students. After implementing each plan, the following findings regarding the activities were established. For example, for the sixth learning management plan, it was found that the first (the personal and self-observation step) and the second step (the learning and understanding step) were the steps when the students learned about actual cases in their communities and took actions. Therefore, the first and second steps were combined into a new first step. As a result, the number of steps was reduced from six to five. The first step was called "learning and understanding of self and others". Then, the five steps were used to implement the 18 learning management plans. It was found that the five steps were suitable for the contexts and the real situations of the students. Consequently, in the end, the learning management processes consisted of the following five steps: (i) learning and understanding of self and others, (ii) inquiry and exchange, (iii) consideration and decision making, (iv) modifying the actions, and (v) reflections and transfers as summarized in the Figure 2.

Figure 2

The learning management process to enhance health literacy among nursing students
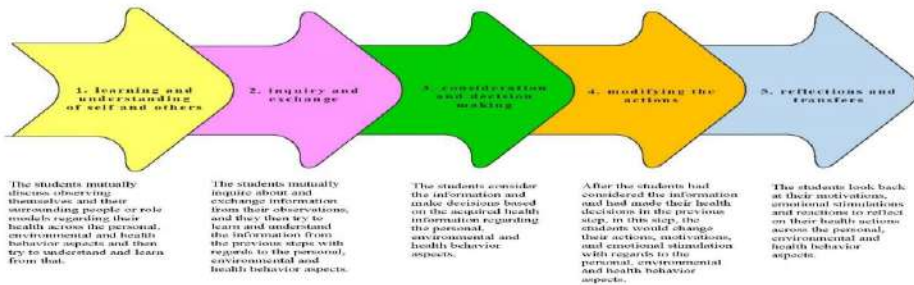
2. When looking at the implementation of the learning management process, after analyzing the data, it was found that the experimental group had a significantly higher level of health literacy after completing the learning management process than before at a significant level of .05. The Hotelling T^2 gained from using the critical value table was 46.16 (Pillai's Trace F = 22.28, Wilks' Lambda F = 22.28, Hotelling's Trace F = 22.28, Roy's Largest Root F = 22.28, p = .00). By considering the multivariate, it was found that the score for the cognitive health after completing the processes was significantly higher than before the processes were completed with a significance level of .05 (F = 105.00, p = .00). The score for having access to health information after the processes were finished was significantly higher than that before the process at a significance level of .05 (F = 58.98, p = .00). The score for health communication after the processes were completed was significantly higher than that before the process at a significance level of .05 (F = 41.62, p = .00). The score for self-management after completing the processes was significantly higher than that before the process at a significance level of .05 (F = 58.73, p = .00). The score for media literacy was significantly higher than that before the processes were completed at a significance level of .05 (F = 37.30, p = .00). The score for decisions making skills was significantly higher than that before the processes were conducted at a significance level of .05 (F = 33.10, p = .00) as shown in Table 2. In addition, the effect sizes of the experiments were compared with the Effect Size Calculator program, and it was found that the effect sizes of the experiments for the health literacy were very large (Glass's Δ = 1.85, Cohen's d = 1.84, Hedges's Unbiased d = 1.82). This showed that the health literacy after the learning management process was better than that before the processes were conducted.

Table 2

Results of Using Hotelling T^2 on The Health Literacy Scores

Effect	Multivariate Tests	Value	F	Hypothesis df	Error df	p
Treatment	Pillai's Trace	0.85	22.28*	6.00	24.00	.00
	Wilks' Lambda	0.15	22.28*	6.00	24.00	.00
	Hotelling's Trace	5.58	22.28*	6.00	24.00	.00
	Roy's Largest Root	5.58	22.28*	6.00	24.00	.00
Tests of Within-Subjects Effects						
Sources of variance	Dependent variables	SS	df	MS	F	p
Treatment	Health cognitive	176.82	1	176.82	105.33*	.00
	Health access	1033.35	1	1033.35	58.98*	.00
	Communication skills	792.07	1	792.07	41.62*	.00
	Self-management	627.27	1	627.27	58.73*	.00
	Media literacy	1016.82	1	1016.82	37.30*	.00
	Decision-making skills	686.82	1	686.82	33.10*	.00

Hotelling T^2 (calculated) = 46.16, df = 24 (Hotelling T^2table > 19.92)

Bartlett's Test of Sphericity: Likelihood Ratio = .00, $\chi 2$= 234.98, p = .00
p<.05

When analyzing the results of the multivariate analysis of covariance (MANCOVA) of the experimental group and the control group by using the pre-existing health literacy level as the covariate, it was found that the experimental group had a significantly higher level of health literacy than that of the control group if the health variables were controlled at a significance level of .05 (F = 21.23, p = .00) as shown in Table 3. Moreover, the effect sizes of the experiment were compared by the Effect Size Calculator program, and it was found that the effect sizes for the experiment on health literacy were high (Glass's Δ = 0.93, Cohen's d = 0.81, Hedges's Unbiased d = 0.80). This showed that the health literacy of the experimental group after the processes had been completed was at a higher level than that of the control group.

Table 3
Results of Using the Multivariate Analysis of Covariance (MANCOVA) on the Health Literacy Scores

Effect	Multivariate Tests	Value	F	Hypothesis df	Error df	*p*
Treatment	Pillai's Trace	0.73	23.94*	6	52	.00
	Wilks' Lambda	0.27	23.94*	6	52	.00
	Hotelling's Trace	2.77	23.94*	6	52	.00
	Roy's Largest Root	2.77	23.94*	6	52	.00
Sources of variance	Dependent variables	SS	df	MS	F	*p*
Treatment	Health cognitive	342.56	1	342.56	149.92*	.00
	Health access	70.04	1	70.04	4.97*	.03
	Communication skills	54.84	1	54.84	2.18	.15
	Self-management	57.04	1	57.04	4.20*	.04
	Media literacy	42.84	1	42.84	1.67	.20
	Decision-making skills	33.88	1	33.88	1.40	.24

Box's M = 39.12, F = 1.66, df1 = 21, df2 = 12372.79, *p* = .03
Levene's Test: Health cognitive F = 3.39, *p* = .07; Health access F = 2.58, *p* = .11; Communication skills F = .16, *p* = .70; Self-management F = .25, *p* = .62; Media literacy F = .15, *p* = .70; Decision-making skills F = .39, *p* = .54
Bartlett's Test of Sphericity: $\chi 2$= 239.09, df = 20, *p* = .00
p<.05

Discussion

The learning management process was developed, re-designed and synthesized after implementation by the nursing students. The prototype for the learning management process consisted of six steps: (i) observation of self and others, (ii) learning and understanding, (iii) inquiry and exchange, (iv) consideration and decision making, (v) modifying the actions, and (vi) reflections and transfers. During the implementation, the learning management process was designed, improved, revised and developed according to the feedback, contexts and the real experiences of the students after implementation. It was comparable to the strategy and approach of design-based research used by the researchers focused on developing, adjusting and applying a certain theory or design when creating educational innovations (Peterson & Herrington, 2005; Christensen & West, 2018). Therefore, the design-based research findings can be utilized to improve the theory or design and expand the knowledge foundation of the developers so that it can lead to more effective innovation developments based on the design framework that was used as a systematical guideline to solve certain problems. As a

consequence, this will result in successful designs suitable for the contexts of the nursing students that took part in this study (Edelson, 2002; Wongwanich, 2020; Tinoca et al., 2022).

After implementing each learning management plan, there were certain findings regarding the activities the students had to complete in each step. In the six-step learning management plan, it was found that the first step (i.e., observation of self and others) and the second step (learning and understanding) of the process were the steps simultaneously taken by the students when performing actual care in the communities. Therefore, the first and the second step were combined into a new step of the adapted learning management process. As a result, the number of processes was reduced from six to five processes. The new first step was called "learning and understanding of self and others". Therefore, the five steps were (i) learning and understanding of self and others, (ii) inquiry and exchange, (iii) consideration and decision making, (iv) modifying the actions, and (v) reflections and transfers. After considering the social cognitive theory (Bandura, 1977), it was found that self-learning by the nursing students still occurred but that it at times was affected by internal factors (i.e., reciprocal determinism) including the involved person, one's behavior and the environment. The students had to learn from the training sessions and develop themselves until they could meet their goals with the learning management process (Khammani, 2021; Ullah, Kaleem, & Aamir, 2020; Zahra, Rosheen, & Fatima, 2022). When considering the social cognitive theory (Bandura, 1977; Bandura, 1986), it was found that the six steps of the process were reduced to five steps by combing the first and second step (i.e., personal and self-observation as well as learning and understanding). Reducing the number of the steps was consistent with the principle of observational learning and its four sub-processes: (1) attentional processes, (2) retention processes, (3) production processes and (4) incentive and motivational processes. This was also consistent with the principle of perceived self-efficacy which looked at using mastery experiences and vicarious experiences or modeling for improvements (Bandura, 1977; Bandura, 1986). It was also connected to the principle of self-regulation that followed the following three sub-processes: (1) self-observation, (2) self-judgment and (3) self-reaction. In other words, the first step being renamed to "learning and understanding of self and others" was still consistent with the social cognitive theory as the three learning methods of theory were integrated (Bandura, 1977; Bandura, 1986). The three remaining methods included observational learning, self-efficacy and self-regulation. Each method had specific processes. Some processes were integrated by the researchers based on the specific contexts and real situations of the students.

By comparing the average scores regarding the health literacy of the nursing students before and after the learning management process applied the social cognitive theory according to the design-based research approach, it was found that the experimental group had a higher score completing the process than that before the process at a significance level of .05. This was consistent with Thongnopakun (2017) who looked at the results after comparing the health literacy average scores before and after the program by applying the social cognitive theory. It was found that the experimental group had a higher average score for health literacy after the program than before the program at a significance level of .05. This was also consistent with the studies by Piwatphungkul & Therawiwat (2018); Khoonkongmee et al., (2019); Munsil et al., (2019) who studied the results after comparing the consuming behaviors and dental caries preventions before and after the program by applying the social cognitive theory. It was found that the experimental group had a higher score for health literacy after the program than before the program at a significance level of .05.

LEARNING MANAGEMENT PROCESS

By comparing the average scores for the health literacy of the experimental group that followed the learning management process to the control group that did not follow the learning management process, it was found that the experimental group had a higher score after the process was completed than that of the control group at a significance level of .05 if the effects of pre-existing health literacy were controlled. This was consistent with the second hypothesis and the findings of Kaper et al. (2020), who found that the experimental group had a higher score for health literacy than that of the control group at a significance level of .05. In addition, a study by Pratummas et al. (2020) that applied the social cognitive theory to learning about consuming healthy food, found that when comparing the group that applied the theory with the other group that did not apply the social cognitive theory there were different levels of healthy food consumption at a significance level of .05. This was also consistent with a study by Saoweang et al. (2016); Sarobol Na Ayutthaya et al. (2018), who found that the group applying the theory had different vegetable and fruit consumption behaviors, self-efficacy, and perceptions with regards to the benefits from oral health care and food consumption from that of the other group who did not apply the theory at a significance level of .05.

By considering the variables of the average scores with regards to the health literacy of the experimental group and the control group, it was found that the average scores for cognitive health, accessing health information, and self-management of the experimental group after the processes were completed, were higher than that of the control group if the effects of the pre-existing of health literacy were controlled at a significance level of .05. Whereas, the average scores of the health communication, the media literacy, and the decision making skills of the control group after the processes were completed were insignificantly higher than that of the control group, it has to be stated that the scores for cognitive health, accessing health information, and self-management were significantly higher than that of the control group because the learning management process consisted of activities that focused on and covered the above variables with descriptions, such as individual and group studies, field studies in the communities around the Faculty of Nursing, while applying the lessons from the activities to daily lives, and other aspects (Kühn et al., 2022). This experiment was conducted among Bachelor students of the Nursing Program. The experimental group and the control group were the nursing students who had passed the basic nursing or medical science courses. Hence, the control group might have had significantly higher average scores regarding their cognitive health, accessing health information, and self-management, than those of the experimental group (Cal et al., 2022; Kühn et al., 2022). Nonetheless, the average scores for health communication, media literacy, and decision-making skills of the experimental group were insignificantly higher than that of the control group. When considering the process and experimental period, it can be concluded that these three variables were personal skills that required longer time periods to develop than the experimental period in order to enable the students to communicate about their health, receive up-to-date health information and make decisions about their health (Marques, 2020; Leblang, Taylor, Brown, Knapp, & Jindal, 2022; Munangatire, Tomas & Mareka, 2022). Moreover, the activities to complete the communication, media and technologies, and decision-making processes might have been limited or might have been conducted in groups that might not cover all students.

Conclusions
In conclusion, the learning management processes to enhance the health literacy of nursing students by applying the design-based research approach in the end consisted of the following five steps: (i) learning and understanding of self and others, (ii) inquiry and exchange, (iii) consideration and decision making, (iv) modifying the actions, and (v)

reflections and transfers. To implement this learning management process, the goals of the learning management plan, media, materials and learning sources should be comprehensively studied beforehand because each learning management plan has different goals with different sub-units. Additionally, the media, materials and learning sources for each plan were different. For some plans, the instructors had to prepare, communicate, and coordinate with communities before conducting the learning activities during the Bachelor of Nursing Science Program. It is recommended to implement these learning management plans for the nursing students who passed basic nursing or medical science courses because some activities involve the checking of the patients' records and bodies which require basic medical science knowledge. The periods for the activities should be extended (especially for communicating about health, receiving up-to-date health information, and making decisions about one's health). For further studies, researchers should focus on applying empirical evidence and the design-based research approach when designing educational innovations in order to provide benefits, meet the needs of the students and to be suitable for the contexts of the users since the mixed synthesis method and the design-based approach in this study designed the process by initially using empirical evidence and the learning cognitive theory to actually improve the health literacy of the students according to their needs and contexts.

References

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavior change. *Psychology Review*, 84, 191-215. https://doi.org/10.1037/0033-295X.84.2.191

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*.New Jersey: Prentice Hall.

Bhutani, J. & Bhutani, S. (2014). Worldwide burden of diabetes. *Indian Journal Endocrinologyand Metabolism*, 18(6), 868-870. https://doi.org/10.4103/2230-8210.141388

Borrero, J. G. (2018). *Nursing students at the HeLM: A study of the effect of a health literacy module (HeLM) on the health literacy knowledge, skills and attitudes of pre-licensure baccalaureate nursing students*. (Doctoral dissertation). Available from ProQuest Dissertations and Theses database. (UMI No. 10746513).

Brook, R. H., Ware, J. E., Jr, Davies-Avery, A., Stewart, A. L., Donald, C. A., Rogers, W. H.,Williams, K. N., & Johnston, S. A. (1979). Overview of adult health measures fielded in Rand's health insurance study. *Medical care*, 17(7 Suppl), iii–131.Retrieved from https://pubmed.ncbi.nlm.nih.gov/459579/

Cal, A., Ünal, N., Öztaş, B., Ölçer, Z., Öge, G., & Şanlıer, N. (2022). Health literacy level of first-year university students: a foundation university study. *Erciyes Medical Journal*, 44(2), 216–21. https://doi.org/10.14744/etd.2021.31848

Chung, C. E., & Prato-Lefkowitz, C. A. (2015). The importance of increasing health literacy content in nursing education. *American Research Journal of Nursing*, 1(1), 10-13. https://doi.org/10.21694/2379-2922.15023

Christensen, K. D. N., & West, R. E. (2018). The development of design-based research. In R.E. West (Ed.), *Foundations of Learning and Instructional Design Technology*. EdTech Books.https://edtechbooks.org/lidtfoundations/development_of_designbased_research

Edelson, D. C. (2002). Design research: what we learn when we engage in design. *Journal of the Learning Sciences*, 11, 105-121. https://doi.org/10.1207/S15327809JLS1101_4

González-López, J. R., & Rodríguez-Gázquez, Mdl., A. (2022). Do health literacy levels of nursing students change throughout the study programme? A cross-sectional study. *BMJ Open*, 12, e047712. https://doi.org/10.1136/bmjopen-2020-047712

Holt, K, A., Overgaard, D., Engel, L, V. & Kayser, L. (2020). Health literacy, digital literacy and eHealth literacy in Danish nursing students at entry and graduate level: a cross sectional study. *BMC Nursing*, 19(22), 1-12. https://doi.org/10.1186/s12912-020-00418-

Johnson, A. (2014). Health literacy, does it make a difference?. *Australian Journal of Advanced Nursing*, 31(3), 39-45. Retrieved from https://www.ajan.com.au/archive/ajan_31.3.html

Johnson, A. (2015). Health literacy: how nurses can make a difference. *Australian Journal of Advanced Nursing*, 33(2), 20-27. Retrieved from https://www.ajan.com.au/archive/ajan_33.2.html

Kaanklao, N., & Suwathanpornkul, I. (2020). Development of the learning management process to enhance the chemistry learning achievement and conceptual comprehension on organic chemistry using the Posner's approach with design-based research. *Kasetsart Journal of Social Sciences*, 41, 282-288. https://doi.org/10.1016/j.kjss.2018.07.016

Kaeodumkoeng, K. (2018). *Health literacy: access, understand, and application*, Nontaburi: Amarin Book Center. [in Thai]

Kaper, S., M., Reijneveld, A., S., van Es, D., F., Zeeuw, J., Almansa, J., Koot, A.R., J., & Winter, F. A. (2020). Effectiveness of a comprehensive health literacy consultation skills training for undergraduate medical students: a randomized controlled trial.*International Journal of Environmental Research and Public Health*, 17(81), 1-15.https://doi.org/10.3390/ijerph17010081

Kennard, D. K. (2016). Health literacy concepts in nursing education. *Nursing Education Perspectives*, 37(2), 118-119. https://doi.org/10.5480/14-1350

Khammani, T. (2021). *Teaching science: knowledge for effective learning management process* (25th Edition). Bangkok: Chulalongkorn University Press. [in Thai]

Khoonkongmee, W., Benjakul, S., Kengganpanich, T., & Kengganpanich, M. (2019). Effects of Weight Reduction Program Applying the Social Cognitive Theory among Troops of Royal Thai Air Force at Donmuang Base. *Journal of Health Education*, 42(2), 136-148. Retrieved from https://he01.tci-thaijo.org/index.php/muhed/article/view/194699

Khumthong, T. (2016). *A causal model and effect of health literacy to health behavior and health outcome of risk Thai adults with diabetes and hypertension in Uthai Thaini and Ang Thong province*. Doctoral Dissertation of Arts (Demography) Chulalongkorn University.

Kühn, L., Bachert, P., Hildebrand, C., Kunkel, J., Reitermayer, J., Wäsche, H. & Woll, A. (2022). Health literacy among university students: a systematic review of cross-sectional studies. *Frontiers in Public Health*, 9, 1-15. https://doi.org/10.3389/fpubh.2021.680999

Leblang, C., Taylor, S., Brown, A., Knapp, J., & Jindal, M. (2022). A structured approach to shared decision making training and assessment of knowledge, attitudes and perception of second year medical students. *Medical Education Online*, 27(1), 2044279. https://doi.org/10.1080/10872981.2022.2044279

Leedy, P. D., & Ormrod, J. E. (2013). *Practical research: planning and design* (10th Edition). Boston: Pearson.

Marques, M. F. M. (2020). Decision making from the perspective of nursing students. *Revista Brasiliera de Enfermagem*, 72(4), 1102-1108. https://doi.org/10.1590/0034-7167-2018-0311

McCleary-Jones, V. (2016). A systematic review of the literature on health literacy in nursing education. *Nurse Educator*, 41(2), 93-97.https://doi.org/10.1097/NNE.0000000000000204

Mullan, J., Burns, P., Weston, K., McLennan, P., Rich, W., Crowther, S. et. al. (2017). Health literacy amongst health professional university studies: a study using the health literacy questionnaire. *Education Sciences*, 7(54), 1-11. https://doi.org/10.3390/educsci7020054

Munangatire, T., Tomas, N., & Mareka, V. (2022). Nursing students' understanding of health literacy and health practices: a cross-sectional study at a university in Namibia. *BMCnursing*, 21(1), 1-8. https://doi.org/10.1186/s12912-021-00776-z

Munsil, J., Kengganpanich, T., Kengganpanich, M., & Benjakul, S. (2019). The effects of dental health promotion program applying social cognitive theory to prevent dental caries among grade 4th students, Phra Nakhon Si Ayutthaya province. *Journal of Health Education*, 42(1), 13-28. Retrieved from https://he01.tci-thaijo.org/index.php/muhed/article/view/187898

Nammontri, O. (2018). Health literacy. *Thai Dental Nurse Journal*, 29(1), 122-128. Retrieved from https://he02.tci-thaijo.org/index.php/TDNJ/article/view/112495

Nutbeam, D. (2000). Health literacy as a public health goal: a challenge for contemporary health education and communication strategies into health 21st century. *Health Promotion International*, 15(8), 259 - 267. https://doi.org/10.1093/heapro/15.3.259

Nutbeam, D. (2008). The evolving concept of health literacy. *Social Science & Medicine*, 67(12), 2072-2078. https://doi.org/10.1016/j.socscimed.2008.09.050

Peterson, R. & Herrington, J. (2005). The state of the art of design-based research. *In: World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education (ELEARN) 2005*, 24-28 October 2005, Vancouver, Canada.

Piwatphungkul, K., & Therawiwat, M. (2018). An application of social cognitive theory to promote healthy food consumption of fifth grade students in one elementary school in Rayong province. *Journal of Health Education*, 41(2), 168-180. Retrieved from https://he01.tci-thaijo.org/index.php/muhed/article/view/163283

Pratummas, J., Therawiwat, M., Imamee, N., & Sompopcharoen, M. (2020). The application of social cognitive theory for healthy food consumption learning of grade 8th students in Bangkok. *Journal of Health Education*, 43(1), 48-60. Retrieved from https://he01.tci-thaijo.org/index.php/muhed/article/view/236776

Rueda-Medina, B., Gómez-Urquiza, J, L., Tapia-Haro, R., Casas-Barragán, A., Aguilar-Ferrándiz, M, E., & Correa-Rodríguez, M. (2020). Assessing health science students' health literacy and its association with health behaviors. *Health and Social Care in the Community*, 28(3), 1– 6. https://doi.org/10.1111/hsc.13024

Saoweang, L., Kengganpanich, T., Tansakul, S., & Kengganpanich, M. (2016). Program for oral care and food consumption among patients with head and neck cancer undergoing radiotherapy or chemoradiotherapy. *Thai Cancer Journal*, 36(1), 7-19.

Sarobol Na Ayutthaya, A., Kaeodumkoeng, K., Kengganpanich, T., & Kengganpanich, M.(2018). Effects of promoting fruit and vegetable consumption behavior program in Grade 6th students, Lopburi province. *Journal of Health Education*, 41(2), 64-78. Retrieved from https://he01.tci-thaijo.org/index.php/muhed/article/view/155713

Sarnkhaowkhom, C., & Suwathanpornkul, I. (2020). Instructional approaches to enhance health literacy of health science students: a mixed-methods research synthesis.

Journal of Community Development Research (Humanities and Social Sciences), 13(4), 47-58. https://doi.org/10.14456/jcdr-hs.2020.35

Sarnkhaowkhom, C. & Suwathanpornkul, I. (2021). Experiences and perspectives about health literacy interventions among health science students: a meta-aggregation approach. *Journal of Behavioral Science*, 16(2), 1–15. Retrieved from https://so06.tci-thaijo.org/index.php/IJBS/article/view/241157

Saunders, C., Palesy, D., & Lewis, J. (2019). Systematic review and conceptual framework for health literacy training in health professions education. *Health Professions Education*, 5(1), 13-29. https://doi.org/10.1016/j.hpe.2018.03.003

Smith, G. D., Ho, K., Poon, S., & Chan, S. W. (2022). Beyond the tip of the iceberg: health literacy in older people. *Journal of clinical nursing*, 31(5-6), E3–E5.https://doi.org/10.1111/jocn.16109

Suwathanpornkul, I. (2020). *Educational research: concepts and applications* (2nd edition). Bangkok: Chulalongkorn University Press. [in Thai]

Tachavijitjaru, C. (2018). Health Literacy: a key indicator towards good health behavior and health outcomes. *Journal of The Royal Thai Army Nurses*. 19(S), 1-11. Retrieved from https://he01.tci-thaijo.org/index.php/JRTAN/article/view/130366

Thongnopakun, S. (2017). *Effects of the "Sex Must Safe" program on health literacy intention and practice regarding condom and emergency contraceptive pill uses among female university students in Chon Buri province, Thailand*. Doctoral Dissertation of Public Health (Public Health) Chulalongkorn University.

Tinoca, L., Piedade, J., Santos, S., Pedro, A., & Gomes, S. (2022). Design-based research in the educational field: a systematic literature review. *Education Sciences*, 12(410), 1-19. https://doi.org/10.3390/educsci12060410

Torres, R. & Nichols, J. (2014). Health literacy knowledge and experiences of associate degree nursing students: a pedagogical study. *Teaching and Learning in Nursing*, 9, 84-92. https://doi.org/10.1016/j.teln.2013.11.003

Trezona, A., Rowlands, G., & Nutbeam, D. (2018). Progress in implementing national policies and strategies for health literacy-what have we learned so far?. *International Journal of Environmental Research and Public Health*, 15(7), 1554. https://doi.org/10.3390/ijerph15071554

Ullah, I., Kallem, M., & Aamir, M. S. (2020). Effectiveness of peer tutoring on the academic achievements of tutors and tutees with respect to knowledge, comprehension and application levels of cognitive domain. *FWU Journal of Social Sciences*, 14(4). 68-79. http://ojs.sbbwu.edu.pk/fwu-journal/index.php/ojss/article/view/8

Vamos, S., Okan, O., Sentell, T., & Rootman, I. (2020). Making a case for "education for health literacy": an international perspective. *International Journal of Environmental Research and Public Health*, 17(4). 1436-1454. https://doi.org/10.3390/ijerph17041436

Voigt-Barbarowicz, M., & Brütt, A. L. (2020). The agreement between patients' and healthcare professionals' assessment of patients' health literacy-a systematic review. *International Journal of Environmental Research and Public Health*, 17(7), 2372. https://doi.org/10.3390/ijerph17072372

Voigt-Barbarowicz, M., Dietz, G., Renken, N., Schmöger, R., & Brütt, A. L. (2022). Patients' health literacy in rehabilitation: comparison between the estimation of patients and health care professionals. *International Journal of Environmental Research and Public Health*, 19(6), 3522. https://doi.org/10.3390/ijerph19063522

Webb, G. L., & Williams, C. J. (2018). Factors affecting language and literacy development in Australian aboriginal children: considering dialect, culture and health. *Journal of*

Early Childhood Research, 16(1), 104–116. https://doi.org/10.1177/1476718X17693417

WHO. (1998). *Health promotion glossary*. Division of Health Promotion, Education and Communications, Health Education and Health Promotion Unit, World Health Organization. Geneva.

Williamson, S. S., & Chopak-Foss, J. (2015). Differences in health literacy knowledge and experiences among senior nursing students. *Journal of Georgia Public Health Association*, 5(2), 184-190. Retrieved from https://www.gapha.org/jgpha/jgpha-vol-5-no-2/

Wongwanich, S. (2020). *Design research in education*. Bangkok: Chulalongkorn University Press. [in Thai]

Yusefi, A. R., Barfar, E., Daneshi, S., Bayati, M., Mehralian, G., & Bastani, P. (2022). Health literacy and health promoting behaviors among inpatient women during COVID-19 pandemic. *BMC women's health*, 22(1), 77. https://doi.org/10.1186/s12905-022-01652-x

Zahra, S., Rosheen, S., & Fatima, (2022). Perceived stress and self esteem: mediating role of self efficacy among IELTS test takers. *FWU Journal of Social Sciences*, 16(1). 122 134. https://doi.org/10.51709/19951272/Spring2022/8

KLEWS Chart's Contribution to Promoting Students' Creativity In STEM Education with the Topic Optics

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This study demonstrates that the KLEWS teaching technique is effective in developing students' creative abilities in STEM education with the subject of Optics. The KLEWS chart allows students to practice logical and argumentative thinking based on scientific information and evidence. Furthermore, teaching according to KLEWS chart stimulates students' curiosity, imagination, creativity, and desire to learn more about science. The mixed methods research was carried out on 161 eleventh grade students in Vietnam (including 80 students in the control group and 81 students in the experimental group). The research evaluates students' creative abilities by observing students' creative expression in normal STEM's topics without KLEWS chart in each group. Then, for the experimental group, organize teaching STEM topics using the KLEWS chart, and for the control group, organize teaching the topics of normal STEM. The results showed that the experimental group reached a high level of creativity (7.77/10 points), while the control group had a medium level of creativity (4.81/10 points). In addition, the research found that students were excited and active in STEM activities; applied the KLEWS chart to explore knowledge of STEM topics; confidently made a presentation and had the ability to use the keywords and scientific terms listed in the KLEWS chart and link them together. The findings of this study will help to clarify the effectiveness of developing students' creative capacity in STEM education using the KLEWS chart .

Keywords: creativity, STEM education, KLEWS chart, Optics, competency.

Faced with the requirement of accelerating industrialization, modernization, and international economic integration, countries around the world's education systems must pay special attention to the issue of educational innovation in order to train a qualified workforce. It is necessary to have high-quality knowledge that includes not only specialized knowledge but also interdisciplinary understanding (Tsupros et al., 2009; Li & Wang, 2021). Furthermore, skills such as using knowledge to solve problems, creating innovative products,

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and working in groups are becoming more valued. STEM education is widely regarded as a game-changing educational reform with the goal of firmly establishing a country's position in economy, science, and technology, as well as training a qualified workforce. STEM jobs are expected to grow rapidly in the United States, where STEM education originated (Carnevale et al., 2013; Li et al., 2020; Sharma & Hudson, 2022). Not only that, but this prediction is shared by other developed countries such as Australia, the United Kingdom, France, Canada, Singapore, and Thailand.

STEM is an acronym for Science, Technology, Engineering, and Mathematics. STEM was originally used to refer to science, technology, engineering, and mathematics development policies in the United States. The National Science Foundation (NSF) coined the term STEM in 2001, and it is now used as a catch-all term for any event, policy, program, or practice involving one or more STEM principles (Bybee, 2010).

According to the U.S. National Academy of Sciences study in 2007, more than 80% of careers growing in this country depended on the proficiency in knowledge and skills in mathematics, technique, science, and technology that STEM Education gave. The background of STEM is the integration in the context of worldwide challenges and problems in education. Orientation of STEM Education helps students have a unified view of science based on their knowledge of the world around them (Carla et al., 2016).

STEM education in high schools is a teaching approach that focuses on developing students' competencies in the fields of Science, Technology, Engineering, and Mathematics. In which students can engage in STEM activities, primarily practice and experiential activities to create products, serve as living and learning tools, or solve practical problems.

Theoretical Framework and Literature Review

Constructivism is one of the most effective educational teaching theories. This theory encourages students to develop their own knowledge based on personal experiences and apply it directly to their learning environment (Marone, 2016). Each individual student is at the center of the teaching process, while the teacher acts as an arbiter to institutionalize new knowledge of the lesson as a controlling organization and a representative of orthodox scientific knowledge. The central concept of constructivism is that knowledge emerges from the learner's self-structured perception into his or her internal system, and that knowledge is subjective. Constructivism is a subject theory that emphasizes the role of the perceiver in the interpretation and construction of knowledge (Nurpatri, et al., 2021). It is necessary to organize the interaction between learners and learning objects in order to assist learners in incorporating new information into their own subject-adjusted thinking structure. Learning encompasses not only discovery but also the interpretation and organization of knowledge. Constructivist teaching entails teachers guiding students to discover knowledge for themselves, perform learning tasks, and develop individual research methods, thereby creating knowledge for themselves.

Existing Knowledge - Predict - Test - Fail - Adapt - New Knowledge is the process by which students acquire new knowledge (Piaget, 1997). According to this process, teaching a new knowledge does not begin with the teacher announcing that knowledge, but rather with discovering the knowledge to be acquired from existing knowledge. Students can be creative, express themselves, make predictions, test their predictions, listen to your point of view, repeat the experiment if necessary, then debate and agree. new ideas and knowledge. Teachers will discover many unexpected or unusual factors by listening to and monitoring students'

opinions and creativity. Teachers will respect students' opinions and encourage students to choose the right path to continue. access to information As a result of that activity, students obtain a knowledge system that meets the requirements while also discovering a way to occupy knowledge. This process is reflected in the creativity that results from the students' thinking process, which is clearly reflected in the STEM teaching process activities. As a result, STEM education is regarded as a teaching model that effectively applies constructivist theory while encouraging students' creative abilities.

Howard Gardner's book "Frames of Mind: The Theory of Multiple Intelligences" was the first to officially publish the theory of multiple intelligences in 1983. The recognition of the many components of human intelligence is at the heart of this psychological theory. Multiple intelligences refers to eight distinct intelligences: linguistic, logical-mathematical, musical, spatial, bodily-kinesthetic, communicative, introspective, and naturalistic intelligences.

However, there are intelligences that are superior to the rest for each individual (Gardner, 2003).
The most valuable aspect of Howard Garder's theory is a new perspective on the diverse human potential and the need to exploit and promote those potentials in teaching. According to the theory of multiple intelligences, each individual almost reaches some level in each of the various "intelligence categories". This level, in particular, is not "constant" throughout a person's life, but may change depending on the individual's cultivation. Based on eight different human intelligences, multiple intelligences theory "provides" eight different potential learning pathways. Gardner (2012), on the other hand, claims that most people only have three of the eight intelligences. This is determined not only by each individual's capacity, but also by their interest in learning. As a result, in addition to focusing on developing learners' strengths, it is also necessary to develop learners' weaknesses. It is also necessary to use appropriate teaching methods to stimulate interest and promote the learner's intellect.

This theory has provided a correct perspective not only for psychological researchers, but also for educators working to develop diverse intelligence in humans. As a result, in education, the spirit of respecting students' individual abilities and potentials must be promoted. As a result, teaching that seeks to comprehensively develop learners must create conditions for the development of multiple intelligences for learners in a variety of fields, rather than focusing solely on the development of logic - mathematics and language, as traditional teaching does.

The overview study of Yildirim (2016) analyzed 34 different studies to show the impact of STEM education on enhancing interest and motivation in STEM fields, developing problem-solving ability, scientific capacity as well as student's learning outcomes (Yildirim, 2016). The positive effects of STEM education on students are manifested specifically in creating learning motivation, increasing positivity, sense of meaning, and enthusiasm for learning (Tillman et al., 2014). This is a key factor which makes learners keep career orientation and persistence in STEM areas (Fortus & Vedder, 2014). STEM education is also considered to have a great influence on academic success and students' attitudes at school (Hurley, 2001). For the impact on career orientation, studies also show that STEM education plays an important role. From the age of 15, students in many developed countries reluctantly choose STEM subjects, although many of these subjects are prerequisites to be promoted in

their universities. Students who do not choose to study STEM subjects have fewer opportunities to contribute to society as STEM experts (Ainley et al., 2008).

Positive experiences in the secondary school years are very important, making favorable conditions for learners to choose STEM subjects in the future. Research shows that most learners recognize the importance of STEM in society, but they do not see the importance of STEM to themselves. Many students choose to study some STEM subjects in high school to support their studies at university, as they get good grades in STEM subjects, they will have the advantage for university admission (Bøe et al., 2011). Developing learners' necessary competencies to engage in STEM fields effectively takes a long time (English & King, 2015). Therefore, high schools need to create a supportive teaching and learning environment to develop students' STEM competencies and create favorable conditions for them to develop later in higher education (Blank, 2013).

In addition to studies that show a positive impact, a number of studies show that STEM education is ineffective at developing creative abilities or improving students' academic knowledge (Yildirim, 2016). As a result, the effectiveness of the way to organize the STEM education model and support teaching techniques in high schools must be carefully studied.

In Vietnam, the Overall program of the new general education program issued in 2018 (Vietnam MOET, 2018) described: STEM education is an educational model based on an interdisciplinary approach, helping students to apply scientific, technological, technical, and mathematical knowledge to solve lots of practical problems in a specific context:
- Mathematical education creates a connection among mathematical ideas, between mathematics and practice; between mathematics and other subjects & educational activities, especially for science subjects, Natural sciences, Physics, Chemistry, Biology, Technology, and Informatics to implement STEM education;

- Natural science education helps students gradually form and develop natural science competencies through observation and experimentation, applying synthesis of knowledge and skills to solve problems in their life simultaneously with Mathematics, Physics, Chemistry, Biology, Technology, and Informatics to implement STEM;
- Technology education is implemented through a variety of subjects and educational activities, of which the core is Technology part in Informatics and Technology subject at primary school level and Technology subject at secondary and high school level. Along with Mathematics, Science, Natural Sciences, Physics, Chemistry, Biology, and Informatics, Technology plays an important role in the implementation of STEM education;

- Informatics education plays a key role in preparing students for the ability to seek, receive, expand knowledge and be creative in the era of the fourth industrial revolution and globalization; effectively supports students' self-studying; creating a stable base to apply digital technology, serving the development of new knowledge content, deploying new and modern educational methods for all subjects and educational activities; Along with Mathematics, Science, Natural Sciences, Physics, Chemistry, Biology, Technology contribute to implement the STEM education.

Thus, according to student-centric teaching orientation in STEM education, it needs to link the fields of science, technology, and society based on the foundation of mathematical

language to unite the three environments: natural, social, and artificial to meet the needs of humans in real society, as proposed in Figure 1 (Bien & Hai, 2019).
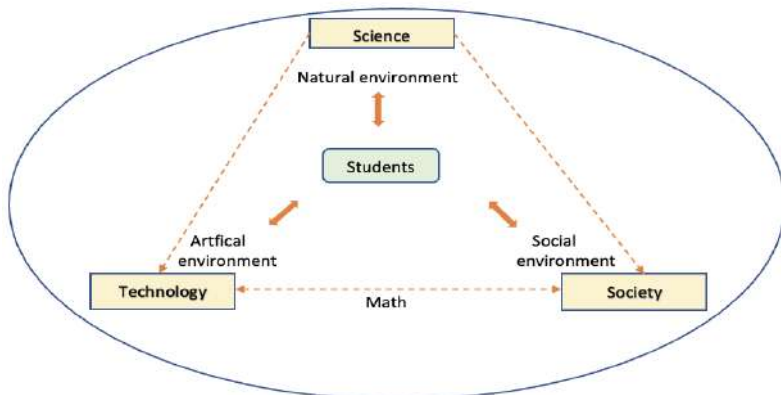
**Figure 1. The connection of natural environment, social environment
and artfical environment in STEM education**

Using the KWL chart in teaching was introduced by Donna Ogle in 1986, which is a kind of organization to teach comprehension activities. The KWL charts support teachers to activate students' prior knowledge of a subject or topic and encourage them to actively learn, read, and research. The KWL chart is particularly useful as a reading strategy when reading texts and it can also be used to assess what students have learned in a unit of study. The KWL chart includes the following elements: *K – What we Know; W – What we want to Learn; L – What we have Learnt*. Students begin by brainstorming everything they already know about the topic of the text. This information will be recorded in column K of the table. Students then make a list of questions about what they would like to know more about in this topic. Those questions will be recorded in column W of the table. During or after reading, they will answer the questions in column W. This information will be recorded in column L (Ogle, 1986).

The term KLEW was firstly introduced by Hershberger et al. in 2006, as a revised and updated version of the KWL teaching technique to meet the requirements of the new education system (Hershberger *et al.,* 2006). There are two obvious differences between the traditional KWL format and the KLEW approach (Max, 2013):
Firstly, traditional KWL charts provide no opportunity for students to demonstrate how their collective evidence has supported students to deeply understand the content. Evidence is essential to teach science today. Therefore, the KLEW chart has devoted an entire column "E" to relevant evidence, so that students not only realize the overall importance but also create the habits in scientific research.

Secondly, the KLEW format shows that learning is never-ending. This idea is at the heart of the scientific research process. While the traditional KWL chart ends the cycle with an "L" – from something learned. This closed-minded approach does not accurately represent the idea of the research process through exploring, discovering, and expecting new problems. Meanwhile, the KLEW chart allows the teacher to state this expectation. When students fill out the "W" column with additional questions, they are demonstrating that new knowledge always leads to new questions, the notion that learning is never-ending.

By 2015, the two authors mentioned above continued to introduce a new update, which is KLEWS, by adding the element "S – what Scientific principles or vocabulary help explain the phenomena?" (Hershberger & Zembal-Saul, 2015). In this column, the teacher explains the concept behind what the students have learned. It is important that based on this final step, students are able to connect with a common concept from their own personal experience in the process. In addition, the addition of scientific terms and principles, can provide a starting point for a more complete scientific explanation. The learning process with the KLEWS chart is based on constructivism, and theory of multipe intelligences, which are two of many important theories to build educational programs (Posner et al., 1982). The elements of the KLEWS chart are described in Table 1.

Table 1
The elements of KLEWS chart

K	**L**	**E**	**W**	**S**
what do we think we *Know*?	what are we *Learning*?	what is our *Evidence*?	what do we still *Wonder* about?	what *Scientific* principles or vocabulary help explain the phenomena?

Creativity is one of the competencies that students need to have in the 21st century when they have to face the strong development of technology and prepare for their future career. Based on the interviews, it was found that students lack skills, especially creative skills, and teachers have not trained students' creative capacity, although the curriculum has been developed and emphasized more on the creative aspect (Hanif et al., 2019). Creativity refers to the creation of a new and appropriate process, product or solution for an ongoing task (Amabile, 2012). If creativity is related to learning and technology, it will produce high-quality work. Recent research has shown that technology allows students to build a number of means that can help them create high-quality work in a creative context (Loveless, 2002). Therefore, creativity is one of the important competencies that need to be developed for students (Dawes & Wegerif, 2004).

Objectives of the Study

This study aims to answer the following two questions:
- How effective is the use of KLEWS chart in organizing STEM educational activities?
- How are students' creative abilities developed when they take part in STEM educational activities using the KLEWS chart?

Significance of the Study

STEM education fosters creativity in students by teaching them about the scientific nature of things and phenomena, researching knowledge, discovering, practicing, and motivating them to participate in learning activities related to future professions (Hsu & Yeh, 2019), assisting in the formation and development of students' creative skills and abilities to solve interdisciplinary situations in life.

Furthermore, the KLEWS chart encourages students' higher-order thinking by assisting them in developing information gathering skills and scientific evidence to support the process of discovery, discovery, and creativity. As a result, using the KLEWS chart in STEM education is a mutually beneficial combination that promotes the optimal development of students' creative capacity. Simultaneously, Optics knowledge has many common

applications in science and technology, piqueing students' interest in learning and exploring. The Optics section's knowledge circuit is based on what students already know to develop new knowledge based on phenomena and data collected from experiments. This is very compatible with the KLEWS chart's teaching process, and is consistent with the constructivism and multiple intelligences theories mentioned above, helping to stimulate students' curiosity, imagination, creativity, and desire to explore deep science. As a result, using the chart to design STEM topics in Optics in the direction of STEM education is extremely effective in developing students' creative capacity.

Method

Research Method

The study was carried out by mixed methods research. Data was collected through observing the process of students' STEM education activities on the subject of Optics.

Sampling Strategy and Sample

The participants, selected through convenience sampling, were the grade 11 students at An Bien high school in Vietnam. They were categorized into two groups: control and experimental, based on similar criteria such as the number of students, age, and academic ability. The experimental and control groups are in charge of the same teacher. The charateristics of participants is shown in Table 2. This method of sampling is used to eliminate unnecessary variables and ensure that the research results are due to the impact of the research topic and not by chance.

Table 2
Characteristics of participants of the study

Info.	Control group		Experimental group	
	11A3	11A4	11A5	11A6
Number	40	41	40	40
Percentage of student with average-above mark	85%	89%	90%	85%

Research Instrument

Based on some creative capacity scales proposed by other authors: Barbot et al., (2011), Nga et al., (2017), and Vietnam MOET (2018), we propose a creative capacity structure that can be used to teach STEM topics as shown in Table 3.

Table 3
An observational instrument for measuring students' creativity

No.	Creative Dimension	Score			
		0	1	2	3
1	Find out new issues, new situations in practice and propose the right and effective solution.				
2	Design diagrams, drawings showing the principle of structure and operation of the technical system and show its novelty and effectiveness compared to the known ones.				
3	Find a new survey and measurement solution, ensure efficiency but easily to implement, ensure accuracy.				
4	Find out new equipment and materials to replace old equipment and materials but still ensure high efficiency and savings.				

5	Propose new design solutions for the existing technical system, changing some design details to improve efficiency.
6	Carry out the implementation of solutions, construction, manufacturing, ... technical systems to bring benefits and social significance.
7	Apply learned knowledge to solve new problems, new situations in practice.
8	Combining mindset manipulations (comparison, analysis, evaluation) and methods of judgment, hypothesis modeling, hypothesis testing, thereby making accurate conclusions for the problem.
9	Create lots of solutions to a real problem and bring optimal efficiency.

The scoring convention is as follows: The maximum score for each expression is 3 points, which are integer points corresponding to the level of each expression in the creative capacity scale, the maximum score of each group in the scale is 27. In order to facilitate the calculation of points in the learning process of students, we proceed to convert the scale score of 27 to a scale of 10 according to the formula:

[Scale score of 10] = [Scale score of 27] x 10/27

The category of creative capacity is shown in Figure 2.
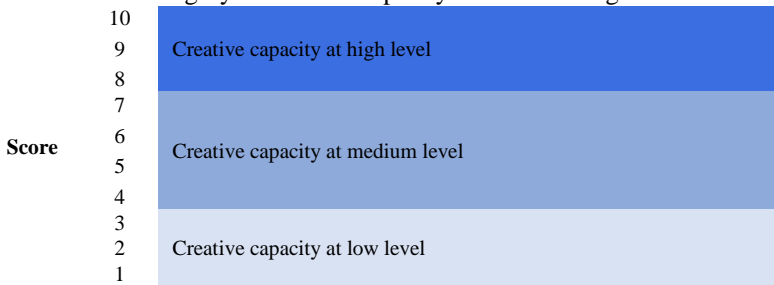
Figure 2. The category of creativity capability

Research Procedure

Based on the process of organizing STEM topics (Vietnam MOET, 2018), we apply the KLEWS chart to STEM educational activities in the direction of developing students' creative capacity in the sequence described in Table 4.

Table 4
The procedure of STEM education using KLEWS chart

No.	Name of activity	Content
1	Identify the problem	Students have the task to complete a learning product or solve a specific problem with criteria that requires students to use new knowledge in the lesson to propose and build solutions.
2	Research the background knowledge and propose solutions	Students discuss and state knowledge related to the topic and fill in column K on the KLEWS chart. Students work on experiments or use simulations to research related problems, note in column L all the problems realized during the implementation attached with proofs for those problems in column E. Columns L and E are performed in parallel, each statement in column L will be followed by one or more evidences in column E, symbols and lines can be used to show the combination.
3	Choose a solution	Organize for students to present, explain and defend the design with

		explanations (using knowledge that has just been learned and existing).
4	Manufacture, experiment, and evaluation	Organize for students to make samples according to the design, in combination with testing during the manufacturing process. Students evaluate the samples and adjust the original design to ensure that the sample is viable. Students add noted information in columns L and E of the general KLEWS chart (if any).
5	Sharing, discussing, and adjusting	Organize for students to present learning products that have been completed; exchange, discuss and evaluate for further adjustment and improvement. Students fill in questions and issues that need further research and improvement in column W. Students state the principles and scientific keywords that were withdrawn in the implementation process.

The pedagogical experiment was conducted over 8 weeks (from the beginning of Febuary to the ending of March, 2022), and had the permission of the Board of Directors and the professional council of An Bien High School, Kien Giang Province, Vietnam. The research assessed students' creative ability by observing the expressions of students' creative capacity in normal STEM lessons without using KLEWS chart in each group. After that, the research organized teaching STEM topics using KLEWS chart for experimental group, but taught normal STEM topics for control group. The groups were held twice a week, and the duration of each group was 90 minutes.

The proccess of pedagogical experiment is carried out through the following stages:

(1)   Stage 1: Proposing the lesson plan;
(2)   Stage 2: Evaluating students' creativity through observating the creative dimensions in STEM-based traditional education in pre-test stage (that is not the STEM topic the researchers proposed);
(3)   Stage 3: Educating following the lesson plan of STEM education using KLEWS chart for experimental group, and the traditional lesson plan for control group;
(4)   Stage 4: Using the observation instrument mentioned in Table 3, evaluating students' creativity.

Teaching Design

We research and build the process of teaching STEM education with the topic *"Design of optical experiments for visually impaired students"*, the specific process is as follows:

Activity 1: Identify research issues about optical experiments for visually impaired students

- Receive learning resources, listen to situations of topic.
- Discuss in groups and analyze the data of the situation.
- State the topic that needs to be implemented.
- Record the task on the KLEWS chart.

Activity 2: Research the knowledge base and propose the solutions to design optical experiments for visually impaired students

- Students discuss in groups and state the knowledge they have learned related to the topic. Write the content in column K in the KLEWS chart.

Figure 3. Students noted the content in the appropriate columns L - E in the KLEWS chart

- Students perform a light refraction experiment with a glass semi-cylindrical and comment on the path of light rays through the experiment. After that, they state the problems that were realized after going through the activities with proof of those problems. They noted the content in the appropriate columns L - E in the KLEWS chart.

- Students observe light-dependent resistors and its module, and add relevant knowledge that has been learned in column K in the KLEWS chart. After that, they do research on the structure and principle of light-dependent resistors and their modules through learning resources from the Internet, keep adding the obtained contents with the proofs and write them in columns L - E respectively in the KLEWS chart.

- Students rely on the KLEWS chart and discuss in groups to propose some options for using materials, technology, and drawings design of products.

Figure 4. Students working in groups

Activity 3: Selecting a solution for an optical experiment kit for visually impaired students

- The groups get the task of presentation, explaining the principles, and introducing the product design that the group has implemented.

- Students report, teake notes, and answer critical questions about the design of optical experiment kits for visually impaired students; self-assess, predict the advantages and disadvantages in the process of product implementation.

Activity 4: Manufacturing, testing and evaluating optical experiment kits for visually impaired students

- Step 1: Receive materials and tools.
- Step 2: Calculate the size of the product, measure, and cut the product. Students can look up the information by themselves or ask for help from teachers if necessary.
- Step 3: Test the product. Adjust the design if necessary.
- Step 4: Finish the product. Prepare the presentations of products. Add noted information to columns L and E of the KLEWS chart (if any).

Activity 5: Sharing, discussing, and adjusting the design of optical experiment kits for visually impaired students
- Groups exhibit the products, make presentations, introduce products and give feedback to protect their products.
- Students fill questions and issues that need further research and improvement in column W. Students state the principles and scientific keywords that were withdrawn in the implementation process.
- Teachers standardize knowledge for students, write down scientific phrases and terms related to product improvement in column S.

Results

RQ1: How does KLEWS chart affect to STEM education?
Through the method of observing the experimental process of organizing STEM education activities mentioned above, we obtained the following comments between the control group and the experimental group as shown in Table 5.

Table 5
Comparing the effects of STEM education on control and experimental group

No.	Control group	Experimental group
1	Students are interested in participating, but still carries out the task that the teacher passively transfers;	Students are excited and actively participate in getting knowledge;
2	Teachers spend a lot of time on research on knowledge base, teachers mainly repeat knowledge. Students answer fragmentary questions and do not know how to link knowledge together;	Students actively give relevant keywords to help the research of knowledge base become more vivid and logical, mobilizing students' existing knowledge;
3	Students have the expression of forgetting the knowledge that has been repeated in the research of a knowledge base that is not associated with proposing the solutions, the teacher needs to explain it again to the students. Students have not provided data and evidence for the above-mentioned contents yet;	Students voluntarily apply the contents filled in the KLEWS table to propose possible solutions that may match the scientific knowledge in a grounded manner, voluntarily collect scientific evidences in the experimental process to fill in the KLEWS chart with aim to support the hypothesis;
4	Students come up with solutions, but they are not innovative and creative, and they can't explain the basis of that solution, and the solutions are emotional;	Students are active and proactive in carrying out the tasks, know how to find information from the mentioned keywords and have breakthroughs and creativity in applying knowledge;
5	Students make a presentation of products that do not use many relevant technical terms, the frequency of mentioning the target knowledge is still low;	Students confidently make the presentation, they are able to use the keywords and terms mentioned in the KLEWS chart, know how to link knowledge together and present logically;
6	Teachers have difficulty condensing and expanding knowledge for students; The class took place as usual, without lots of creative and breakthrough elements. The duration of activities is often not guaranteed as planned in the lesson plan.	Teachers easily finalize the important knowledge and orient to expand research on other optimal solutions through the KLEWS chart stored on the large board, ensuring that the period of activities goes according to the lesson plan as expected.

Based on data from the qualitative analysis, it shows that using the KLEWS chart to organize STEM educational activities helps students to be excited and active, and they can apply the KLEWS chart to discover knowledge of STEM topics; Students confidently present and are able to use keywords and scientific terms listed in the KLEWS chart and link them together; Teachers easily finalize their knowledge and orientation to expand the topic through the KLEWS chart that has been saved throughout the implementation process. At the same time, ensure that the period of activities takes place exactly as the lesson plan of the STEM topics.

RQ2: How is students' creativity developed in STEM education using KLEWS chart?
Using the research tools listed in Table 3, we assessed students' creative capacity by observing the students' creative dimensions before and after the experiment. The result is shown in Table 6.

Table 6
The assessing result of students' creativity

Stage	Group	Score of dimensions									Average Score	Category
		1	2	3	4	5	6	7	8	9		
Pre-test	Control	0	2	0	1	1	1	2	0	0	2.96	Low
	Experimental	0	2	0	2	1	1	1	0	0	2.59	Low
Post-test	Control	2	2	1	2	1	2	1	1	1	4.81	Medium
	Experimental	2	3	2	3	2	3	3	1	2	7.77	High

The pre-test results showed that the creative capacity of students in the control group and experimental group before the experiment was similar and both had a low level of creativity. In particular, the expression of numbers (1), (3), (8), and (9) are all unsatisfactory.

From the post-test results, we found that: the experimental group has a high creative capacity, and the control group has a medium creative capacity; The creative capacity of students in the experimental group (7.77/10 points) is much higher than that in the control group (4.81/10 points). The expressions of (1), (3), (8), and (9) are all at a satisfactory level or higher in the experimental group, while in the control group, there are still some unsatisfactory expressions in STEM topics.
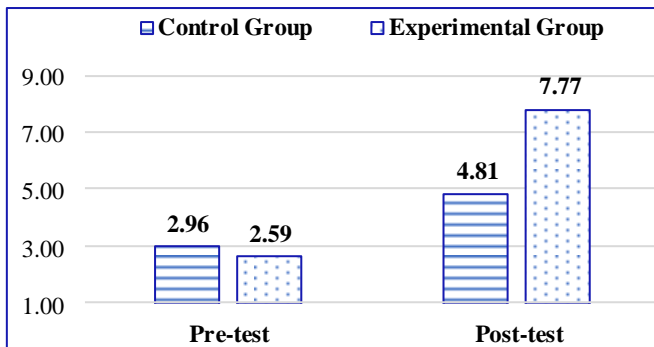

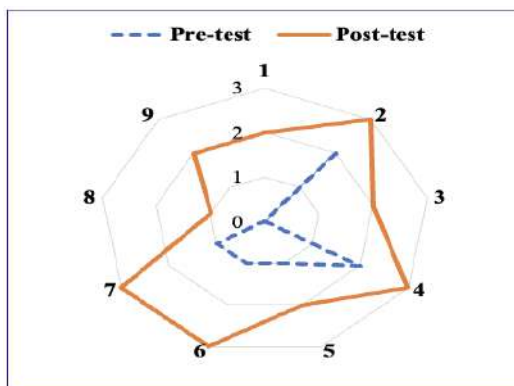*Figure 5. Comparing the creativity capability of control group and experimental group*

Figure 6. Students' creativity of experimental group for each creative dimension

For the experimental group using the KLEWS chart in the process of organizing STEM educational activities, the researchers found that creative expression (2), (4), (6), and (7) reached the maximum level. The expressions of (1), (3), (8), and (9) are from unsatisfactory to satisfactory after applying the research topics. This shows that the KLEWS chart is very effective to develop students' creative capacity.

Discussion

STEM education combined with the KLEWS chart is a type of teaching that can help students develop their competencies, form, and develop many skills, so it is very important to promote development in high schools. High schools need to continue to facilitate the organization of STEM topics using the KLEWS chart in schools to improve creativity for learners. The use of the KLEWS chart in organizing STEM educational activities needs to be done methodically as stated in the research, however, based on the capacity of the students, it can be applied flexibly. Teachers need to be proactive and spend much time investing and building lesson plans on STEM topics that are interesting for students to participate in. At the same time, deploying the teaching techniques with the KLEWS chart appropriately in many various learning situations. Students need to have a positive attitude towards study, discover new knowledge, and keep a serious attitude to study, constantly striving, improving knowledge, and developing their own capabilities. Moreover, when the students work in group to complete a mission, this will improve their cooperative behavior which is very important for human lives, works and society in 21st century (Chatathicoon et al., 2022). The training and organizing training courses for teachers to improve awareness, understanding, and skills to organize STEM topics and apply the KLEWS chart to teaching should be enhanced to promote students' creativity.

In the session of researching and proposing solutions, students are allowed to discuss in groups, exchange and state their learned knowledge related to the research issue and note the content in column K. Students' brain function will be affected by their increased attention (Makmee, 2022). Listing the mentioned knowledge in column K increases the student's attention to the problems. This activity helps them link knowledge to support the creative process in the following activities. Rustaman et al., (2003) said that the process of discussion creates many advantages with aim to stimulate students' creativity to express their own point

of view, students are responsible for the results of group activities. At the same time, students can experience real or simulated experiments, record the problems realized during the implementation in column L attached with evidences for those problems in column E. Munandar (2004) stated that creative thinking can be developed through experiments and discussions among students. The KLEWS chart saves the main content, orients the creative thinking process for students, helps them propose multiple solutions and choose effective solutions. Based on columns K, L and E, teachers can easily see and evaluate students' ability to apply knowledge to solve creative problems. Creative expressions (1), (2), (3), (4), and (5) are clearly expressed.

The collected information is continuously added to column L and column E of the KLEWS chart in making samples, testing, and evaluation. This requires students to try to think of problems and shortcomings, events that occur in the process of manufacturing, testing products and explain to them by specific data. This process helps to train students to collect information and scientific evidence while students observe in reality or on experiment, which creates a scientific basis for their creative process. Creative expressions (6), (8), and (9) are effectively promoted.

In the session of sharing, discussions, and adjustments, students have the opportunity to discuss, ask questions, express their thinking, and issues that need to be researched, improved, and then they fill in the key contents in column W after groups of students make presentations about their completed learning products. The teacher guides students to state the principles and important scientific keywords to use in the research and fill in column S briefly. In this case, students' creative capacity plays an important role in creating new effective solutions to improve and fix students' products (Capraro & Morgan, 2013). Column W and column S in the KLEWS chart stimulate curiosity and be used as a premise to keep developing students' creativity after the end of STEM educational activities, helping students apply their acquired knowledge to solve new problems, new situations in practice - creative expression (Besemer & Treffinger, 1981; Royston & Reiter-Palmon, 2019).

Conclusion

The KLEWS chart plays an important role in developing students' creative capacity in activities of STEM topics. The KLEWS chart focuses on the evidence factor based on experimental observations. It is an important characteristic in the field of science (Max, 2013). For KLEWS-based teaching, students have the opportunity to practice creativity, logical thinking, and argumentative thinking based on evidence and scientific information (although not all observation results are scientific information). In addition, the process of learning according to the KLEWS chart also helps to stimulate students' curiosity, imagination, creativity, and desire to explore deeper science by helping them to set their own next wonder. At the end of the KLEWS chart are scientific concepts or scientific principles and even scientific explanations. This helps students update important keywords to support further research and develop their creativity at a higher level.

References

Ainley, J., Kos, J., & Nicholas, M. (2008). Participation in science, mathematics and technology in Australian education. *ACER Research Monographs*, 4.

Amabile, T. M. (2012). Componential Theory of Creativity. *Harvard Business School*, 1–10.

Barbot, B., Besançon, M., & I Lubart, T. (2011). Assessing creativity in the classroom. The open education journal, 4(2), 58-66. Besemer, S. P., & Treffinger, D. (1981). Analysis of Creative Products: Review and Synthesis. *The Journal of Creative Behavior*, 15(3), 158-178.

Bien, N. V., Hai, T. D. (2019). *STEM education in high school*. Vietnam Education Publisher.

Blank, R. K. (2013). Science Instructional Time Is Declining in Elementary Schools: What Are the Implications for Student Achievement and Closing the Gap. *Science Education*, 97(6), 830- 847.

Bøe, M. V., Henriksen, E. K., Lyons, T., & Schreiner, C. (2011). Participation in science and technology: young people's achievement-related choices in late-modern societies. *Studies in Science Education*, 47(1), 37-72.

Britto, A. (2013). The K-W-L-H Learning Strategy*, https://ezinearticles.com*, 22/3/2022.

Bybee B. (2010). Advancing STEM Education: A 2020 Vision. *Technology and Engineering Teacher*, 70(1), 30–35.

Capraro, R. M., Capraro, M. M., & Morgan, J. (2013). *STEM Project-Based Learning: An Integrated Science Technology Engineering and Mathematics (STEM) Approach*. Rotterdam: Sense Publishers.

Carla, C. J., Erin, E. P-B., & Tamara, J. M. (2016). *STEM Road Map - A Framework for Integrated STEM Education*. New York.

Carnevale, A. P., Smith, N., & Strohl, J. (2013). Recovery: Job growth and education requirements through 2020.

Chatathicoon, S., Thinwiangthong, S., & Ya-amphan, D. (2022). Early Childhood Cooperative Behaviors through HighScope Approach in Thailand. *FWU Journal of Social Sciences*, *16*(1).

Dawes, L., & Wegerif, R. (2004). *Thinking and learning with ICT: Raising achievement in primary classrooms.* London: Routledge Falmer.

English, L. D., & King, D. T. (2015). STEM learning through engineering design: Fourth-grade students' investigations in aerospace. *International journal of stem education*, *2*(1), 1-18.

Fortus, D., & Vedder-Weiss, D. (2014). Measuring students' continuing motivation for Science learning. *Journal of Research in Science Teaching*, *5*/(4), 497-522.

Gardner, H. (2003). Multiple intelligences after twenty years. *American Educational Research Association, Chicago, Illinois*, *21*, 1-15.

Gardner, H. (2012). The theory of multiple intelligences. *Early professional development for teachers*, *133*.

Hanif, S., Wijaya, A. F. C., & Winarno, N. (2019). Enhancing Students' Creativity through STEM Project-Based Learning. *Journal of science Learning*, *2*(2), 50-57.

Hershberger, K., Zembal-Saul, C., & Starr, M. L. (2006). Evidence helps the KWL get a KLEW. *Science and Children*, *43*(5), 50-53.

Hershberger, K., & Zembal-Saul, C. (2015). KLEWS to explanation-building in science*, Science and Children*, *52*(6), 66-71.

Hurley, M. M. (2001). Reviewing integrated science and mathematics: The search for evidence and definitions from new perspectives. *School science and mathematics*, *101*(5), 259-268.

Hsu, Y. S., & Yeh, Y. F. (2019). *Asia-Pacific STEM Teaching Practices*. Springer, Singapore.

Li, Y., Wang, K., Xiao, Y., & Froyd, J. E. (2020). Research and trends in STEM education: A systematic review of journal publications. *International Journal of STEM Education*, *7*(1), 1-16.

Li, X., & Wang, W. (2021). Exploring spatial cognitive process among STEM Students and its role in STEM education. *Science & Education*, *30*(1), 121-145.

Loveless, A. M. (2002). *Literature Review in Creativity*. England.

Marone, V. (2016). Playful constructivism: Making sense of digital games for learning and creativity through play, design, and participation. *Journal For Virtual Worlds Research*, *9*(3).

Makmee, P (2022). Increasing Attention and Working Memory in Elementary Students Using Mindfulness Training Programs. *FWU Journal of Social Sciences*, 107.

Max S. (2013), KLEW: An Improved KWL Chart, *https://mpstanford.wordpress.com,* 15/4/2021.

Munandar, U. S. C. (2004). *Pengembangan Kreativitas pada Anak Berbakat*. Jakarta: Rineka Cipta.

Nga, N. T. T., & Dien, B. T. Exploring middle school students' creative capacity in reading literary texts. *Vietnam journal of educational sciences*, 17 (1), 25-32.

Nurpatri, Y., Muliani, D., & Indrawati, E. S. (2021). Implementation of constructivism approach in physics learning on students' critical thinking ability of junior high school students. In *Journal of Physics: Conference Series* (Vol. 1876, No. 1, p. 012068). IOP Publishing.

Ogle, D. M. (1986). K-W-L: A teaching model that develops active reading of expository text. *The Reading Teacher*, 39(6), 564-570.

Piaget, J. (1997). *The principles of genetic epistemology* (Vol. 7). Psychology Press.

Posner, G. J., Strike, K. A., Hewson, P. W., & Gertzog, W. A. (1982). Accommodation of a scientific conception: Toward a theory of conceptual change. *Science education*, *66*(2), 211-227.

Royston, R., & Reiter-Palmon, R. (2019). Creative self-efficacy as mediator between creative mindsets and creative problem-solving. *The Journal of Creative Behavior, 53*(4), 472-481.

Rustaman, N. Y., Dirdjosoemarto, S., Yudianto, S. A., Achmad, Y., Subekti, R., Rochintaniawati, D., & Nurjani, M. (2003). *Strategi Belajar Mengajar Biologi*. Bandung: JICA IMSTP FPMIPA UPI

Sharma, A., & Hudson, C. (2022). Depoliticization of educational reforms: the STEM story. *Cultural Studies of Science Education*, *17*(2), 231-249.

Tillman, D., An, s., Cohen, J., Kjellstrom, w., & Boren, R. (2014). Exploring wind power: Improving mathematical thinking through digital fabrication. *Journal of Educational Multimedia and Hypermedia*, *23*(4), 401- 421.

Tsupros, N., Kohler, R., & Hallinen, J. (2009). *STEM education: A project to identify the missing components*. Pennsylvania.

Vietnam Ministry of Education & Training (MOET) (2018). *Overall educational program*. Vietnam.

Vietnam Ministry of Education & Training (MOET) (2018*). STEM education approach in high school*. Vietnam.

Yildirim, B. (2016). An Analyses and Meta-Synthesis of Research on STEM Education. *Journal of Education and Practice*, *7*(34), 23-33.

Likert Scale in Social Sciences Research: Problems and Difficulties

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The Likert scale is one of the essential rating scales used as a measurement tool in social sciences research, especially in the qualitative approach. Unfortunately, this scale has a great deal of controversy surrounding how data is obtained from Likert questionnaires and the appropriate statistical analysis of these data. A systematic review was performed to address this issue. Research publications from various recognized national and international articles served as research objects. This paper provides a comprehensive study of the two-perspective of the rating scales based on measurement experts, statisticians, education researchers, and other practitioners. The experts' opinions, analyses, suggestions, and solutions are obtained from journal articles, proceedings, theses, and books. After reading this article, the reader should be able to know that the accurate Likert scale produces data intervals for social sciences research. However, some requirements must be considered, specifically the composite score, midpoint, and the number of points. If these conditions are implemented, statistical methods, parametric and non-parametric, can be used to analyze the data depending on the research purpose.

Keywords: interval data, Likert scale, measurement, parametric and non-parametric, social sciences research

One of the most perplexing aspects of social sciences research is that many of the variables studied are psychological or latent constructs that cannot be directly observed (Harwell & Gatti, 2001; Blanchard, Artino, & Visintainer, 2014). Latent constructs or latent variables may be hypothetical variables, unmeasurable, or unobservable (Bollen, 2002).

Quantification of a latent variable is a complicated procedure based on the measurement of selected indicators that reflect its specific features (Lautre & Fernandez, 2004). To measure a latent variable, a researcher needs a manifest variable (Harwell & Gatti, 2001) that is measured using a rating scale or rubrics. Self-confidence, motivation, and anxiety are examples of latent variables. These variables should be assessed by self-report, using a rating scale. The aim of a

rating scale is to provide an objective response that includes and excludes responses (Garland, 1991; Albaum, 1997). One of the most widely used rating scales is the Likert Scale.

The Likert scale is widely recognized as an easy and reliable scaling technique (Royeen, 1985) with which it is easy to measure and understand respondent perception (Subedi, 2016). Van Laerhoven et al., (2004) stated that respondents found a Likert scale to be more manageable and faster than other scales. However, there is uncertainty surrounding how researchers should analyze data derived from Likert scales (Knapp, 1990; Subedi, 2016). Examples include whether the data are interval or ordinal (Cohen, Manion, & Morrison, 2000; Blaikie, 2003); whether a mid-point uses (Garland, 1991; Cox, 1980); and which words should be used as a mid-point (Singh, 2006); how many points are optimal to construct the scale; and whether parametric statistics are appropriate for questionnaire data (Harpe, 2015).

This paper conducts a comprehensive study about the controversial questions of the Likert Scale based on measurement experts, statisticians, education researchers, and other practitioners. The expert opinions, issues, challenges, analysis, suggestions, and solutions are obtained from a variety of papers and articles that can be accessed and then affirmed by our interpretations as a team of researchers. The discussion begins with the historical development of the use of the Likert scale. Further studies regarding several controversies in the Likert scale's use will be discussed in detail by presentation the opinions of several opposing experts.

Method

The purpose of this study is to conduct an analysis of published publications discussing the Likert Scale, focusing on five issues but not limited issues regarding: composite scores, midpoints, statistical controversy, number of points, and item development. We searched Google, Google scholar, and Microsoft Academic, using the search term "Likert scale" for articles published from 1 January 1972 to 31 December 2020. The publications cited were drawn from journals, books, thesis, and proceedings.

Google provides more than five million search results, whereas Google Scholar produces more than one million results. Likewise, Microsoft academics produce many articles related to the Likert scale. PDFs and reputable publications as criteria were used to analyze findings in order to decrease the quantity of articles to be evaluated.

There were 58 articles found for further evaluation. These articles are the result of research in various fields of study, especially in the social field. Articles that are not research results are also used, if they are studies based on research articles. This is so that the conclusions obtained are based on facts, not opinions.

We also manually searched specialized publications and citations from the articles identified in the original search. Once all documents were obtained, they were examined to ensure they could be used to accomplish the research objectives. Selected articles are those that address at least one aspect of the five research focuses. However, to support the study conclusions, publications that do not pertain to the five research components were also chosen. For instance, the articles that discusses the history of the Likert Scale, and which uses a Likert Scale as an instrument to collect data.

As a research strategy, we apply an integrated literature review to provide information by examining and discussing in-depth several Likert-scale studies. This procedure consists of four

steps: review design, execution, analysis, and writing (Synder, 2019; Torraco, 2005). Several key criteria, such as the topic, the aims and rationale of the study, the scope and specific research questions, and the beginning of literature collecting, are defined in the first step of review design. The researchers then conduct a literature review, beginning with determining when to do the study, analyzing and synthesizing the material, and finally testing a review technique. The method for assessing literature was critical analysis, which involves a careful evaluation of major concepts and their applicability to a situation, as well as a critique of current literature. In the interim, synthesis is conducted by combining new and current topics or ideas to generate a new formula for the subject under discussion. This study's synthesis is a novel approach to examining the subjects included in an integrated review; it is derived directly from the critical analysis and synthesis undertaken (Torraco, 2005).

In addition, the third phase is the analysis review. Reasoning and logic replace data analysis. In the integrative literature review, it serves as the conceptual foundation for arguments and explanations. These are the two most important components used to develop the proposed concept. A review that is written with precision and clarity comes last. The study's significance and necessity are addressed.

Moreover, the review procedure, including how the resource is identified, synthesized, processed, and reported by researchers, is discussed in detail. In integrated review research, review outcomes are not analyzed and evaluated as extensively as in empirical investigations. Nevertheless, the quality of a paper is evaluated by its breadth, depth, and contribution to a topic or subject that is truly original and of high value (Synder, 2019).

Results and Discussion

Brief History and Development of Likert Scale
The Likert scale was created by the sociologist Rensis Likert who proposed a scale for measuring attitudes (Likert, 1932). Likert scales measure attitudes by asking people to indicate how strongly they agree or disagree with a series of statements about a topic (McLeod, 2019). It consists of a series of related Likert-type statements about the specific attitudinal to be measured (Desselle, 2005; Willits, Theodori, & Luloff, 2016) and several items that are essential in the measurement of an underlying construct (Holt, 2014) as shown in Figure 1. Five points is a type of Likert scale that is most widely used in various social studies that use a Likert scale. It is also easier to use because it can map respondents' choices into five clear options, ranging from strongly disagree to agree strongly. If the number is seven or even 11, it will be difficult for respondents to make choices. In addition, 5 points is the number of points developed by Rensis Likert (Edmondson, 2005).
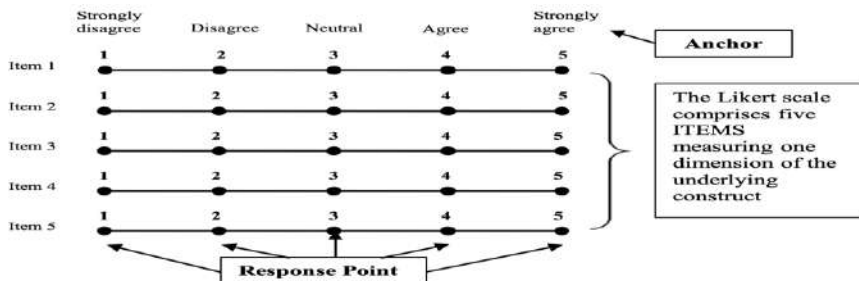

Figure 1. Structure of A Likert Scale (adapted from Holt (2014))

A Likert scale refers to a set of four or more Likert-type items combined into a single composite score used for data analysis. Typically, the researcher only wants to look at the composite score (Clason & Dormody, 1994). The items are questions or statements (Table 1).

Table 1
The Statements to Create a "Desire to Success in Mathematics" Likert Scale

No	Items	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	I study mathematics everyday					
2	I learn mathematics without being instructed					
3	I solve difficult mathematics to finish					
4	I am doing homework by myself					
5	I was very enthusiastic in mathematics class					

A Likert-type scale uses a single item that references a single Likert response. Alternatively, multiple questions may be used, but the researcher has no attempt to combine them into a single-item scale (Clason & Dormody, 1994). Table 2 provides an example of five common Likert-type items. Each item measures a distinct phenomenon and the items could not be combined to form a scale (Subedi, 2016). The five items are not part of a dimension that measures one phenomenon but consist of five different aspects.

Table 2
The Statements to Create a "Mathematics Homework" Likert-type Scale

No	Items	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	Homework is a problem for students					
2	Homework important in mathematics learning					
3	I never solve mathematics homework at home					
4	My parent helps me when I'm doing the homework					
5	Homework must be provided on every lesson					

Composite Score

Latent variables are hidden variables and thus cannot be measured directly. For example, to assess a student's motivation to learn, the teacher or researcher needs to measure several indicators, such as the student's frequency of attending classes, punctuality, and whether the student actively asks questions in class. The value of each indicator is then added up or averaged to obtain a student's level of motivation in learning. This is the composite score.

Each respondent's rating is scored as Strongly Agrees = 1, Agrees = 2, Neutral = 3, Disagrees = 4, and Strongly Disagrees = 5. An individual's score is determined by the sum of all possible points (Gay, Mills, & Airasian, 2009). The Likert scale is constructed by summing up the defining items (Michalopoulou & Symeonaki, 2017). The Likert scale is composite or 'Battery' of multiple Likert items (Johns, 2010).

An individual item is not the best measure for the entire phenomenon of interest (Harpe, 2015). Several different scales measure the phenomenon. Variables are not only measured by a collection of objects but by a collection of items that vary in size. Likert's original thinking

suggests that the intensity of the phenomena of interest be measured by the aggregate of items on the scale, not by any single entity. Separating the items generates a new scale, undermining the theory on which the original aggregated scale was developed (Harpe, 2015).

The Likert scale is a total of multiple Likert items (Brown, 2011; Boone & Boone, 2012) and can be treated as continuous data (Harpe, 2015) because human thinking and feelings are continuous variables (Yusoff & Janor, 2014). Thus, the Likert scale is also known as the summated rating scale (Royeen, 1985) or summative scale (Viljoen, 2015).

How many items are ideal for constructing a Likert scale?

Determination of the required number of items to be included in the Likert scale remains problematic (Willits, Theodori, & Luloff, 2016). Scales with too many items can cause fatigue or response distortions (Anastasi, 1976) and may also take more time to construct (Carmines & Zeller, 1979). There are no established guidelines on the number of items to be included in the final scale. Diamantopoulos et al., (2012) believe that the Likert scale should consist of at least four items. The reliability of various items increases as the number of items increases, but each item's reliability decreases as the number of items increases (Carmines & Zeller, 1979; Hinkin, 1995). Consequently, Hinkin (1998) proposed five items as the most suitable for most constructs (Hinkin, 1998).

Other types of Likert scale can be used to measure frequency, importance, quality, and likelihood (McLeod, 2019). The terms to measure frequency are: never, rarely, sometimes, often, and always (Sullivan & Artino Jr., 2013) or never, seldom, occasionally, frequently and always (Prince, 2017) (Table 3). This type is also known as a behavior rating scale.

Table 3
A Behavior Rating Scale for the Measurement of Student Participation in Learning Mathematics

No	Items	Never	Seldom	Occasionally	Frequently	Always
1	I study mathematics everyday					
2	I learn mathematics without being instructed					
3	I solve difficult mathematics to finish					
4	I am doing homework by myself					
5	I was very enthusiastic in mathematics class					

Midpoint Problems

In the use of the Likert scale, it is crucial to word a midpoint appropriately (Singh, 2006). Words used for midpoints include neutral, no opinion, undecided, and neither (Guy & Norvell, 1977; Armstrong, 1987). These words have different functions and roles and will elicit different responses.

Using the midpoint of "neither agree nor disagree" means you have a neutral opinion. Regardless of whether Undecided should be used as a midpoint, it is questionable if it is an actual midpoint between disagreement and agreement or whether it should be treated as the absence of opinion (Chyung et al., 2017). Moreover, the use of neutral and undecided is not the same. It is assumed by most that "neutral" is the neutral middle between "agree" and "disagree," but such an assumption is open to question. Even less specific is the premise of what

"undecided" means and whether respondents in the survey are aware of different meanings of the term (Guy & Norvell, 1977). Other points of view, such as I do not know or depend, should not be used as mid-point choices (Chyung et al., 2017). Therefore, the most appropriate word to use is neutral.

Controversy exists about whether the midpoint on a traditional Likert scale is worthless. Chyung's work shows that using midpoint allows neutral or indifferent respondents to express their true opinions on the topic. The respondents chose to respond or declined to respond. Sometimes, the respondent may find it challenging to respond to a question if the Likert scale uses the midpoint (Chyung et al., 2017). Respondents who choose the neutral option may indicate failure to cooperate, apathy, or laziness. An alternative possibility is that some participants have no opinion regarding the rated object (Viljoen, 2015). They do not have enough background knowledge about the topic and are ambivalent about the issue. They believe that their choice depends on other variables (Chyung et al., 2017).

Statistics Controversy
Harpe (2015) argued that the Likert scale is one of the most fundamental and often used measurement tools in the social sciences. Controversies exist in regard to appropriate data analysis. When the data are ordinal, non-parametric statistics are most appropriate for the analysis (Martilla & Carvey, 1975; Vigderhous, 1977; Knapp, 1990; Kuzon, Urbanchek, & McCabe, 1996; Jakobsson, 2004; Jamieson, 2004). If the data are measured continuously, parametric statistics may be applicable (Bishop & Herron, 2015). Some Authors state that Likert data are in the form of interval levels, so algebra can be used to calculate means and standard deviations, and the data can be analyzed using parametric statistical methods (Norman, 2010; McLeod, 2019).

Parametric analysis results are more statistically reliable than non-parametric analysis results (Bishop & Herron, 2015). Furthermore, Sullivan and Artino Jr. (2013) stated that non-parametric statistics have less power than the parametric test when tested on large samples. Parametric statistics has also a variety of methods so that researchers can use it for a variety of research purposes. However, the use of parametric statistics requires some basic assumptions. For example, for the analysis of variance - the F test, requires the assumption of normality, homogeneity, and independence.

Bishop and Herron (2015) define statistics as not substitutes for thinking about what survey data tell us and how it relates to the population. Statistical analysis is simply a method for researchers to reach a conclusion based on the data. However, it cannot draw statistical conclusions without accurate statistical analyses (Bishop & Herron, 2015).

The act of using parametric statistics for ordinal data has been described as committing the "first of the seven deadly sins of statistical analysis" (Kuzon, Urbanchek, & McCabe, 1996). Parametric statistics require data that fit into categories like ratios and intervals (Jamieson, 2004). Means and standard deviations are not always evident when descriptive terms are used in a Likert item (Sullivan & Artino Jr., 2013), for example, what is the average of the "strongly agree" and "agree" responses?

Consider the following contradictory statements, the use of parametric statistics for ordinal data – Likert data is not a deadly sin. Data Likert – although (if) classified as ordinal data, can be analyzed using parametric statistics, for example, using logistic regression to

analyze the ordinal data. Item response theory is an example of using parametric statistical methods for ordinal data. Kuzon, Urbanchek, and McCabe (1996) propose the use of statistical methods that require data with normal distribution or other continuous distribution, such as Z test, t-test, linear regression, and analysis of variance.

Are Likert scales ordinal, not interval scales? An example of interval data is how body temperature is measured using a thermometer. Suppose, Object A has a temperature of 45°C, while Object B has a temperature of 75 °C. If the two objects are heated such that the temperature of object A becomes 50 °C, while the temperature of object B becomes 80 °C, the increase in temperature is the same for each object, but the amount of energy required to achieve this differs. Analogously, on a Likert scale, the distance between each point is the same, but the perception of respondents is different depending on their background and experience. Therefore, an assessment by several respondents is needed so that the Likert data produces interval data (see discussion of composite data).

If the aim is to calculate a common set of scores for different participants, then the assigned scale will be an interval scale. However, if the researcher wants to compare different items (composite score, Likert type scale), the scale will be nominal (Tastle & Wierman, 2007). A Likert-type scale using a total score of all items is an interval scale. By contrast, items using the Likert scale are ordinal scales (Carifio & Perla, 2008). Likert treated all data as interval data (Brown, 2011; Sarafidou & Chatziioannidis, 2013; Jain, Adil, & Ananthakumar, 2013).

Six decades have propagated common misunderstandings, misconceptions, and conceptual errors regarding "Likert scales" (Carifio & Perla, 2007; 2008). With small sample sizes, different variances, and non-normal distributions, parametric statistics can be applied to Likert data without the risk of "coming to the wrong conclusion" due to the interpretation of the results (Norman, 2010). Carifio and Perla (2008) state that Likert scales are interval in nature. In general, they may be regarded ratios if they have the appropriate anchor descriptions (Holt, 2014).

Several studies have determined that parametric and non-parametric statistical tests yield comparable results when applied to Likert data, including Pearson regression and Spearman rho regression (Tastle & Wierman, 2007), the t-test and the Mann-Whitney-Wilcoxon test (De Winter & Dodou, 2010). Classical test theory and item response theory did not yield significantly different results when applied to Likert data (Liu et al., 2022). Item response theory is a measurement approach that converts ordinal data into interval data (Harwell & Gatti, 2001).

Those who argue against the use of parametric tests for the analysis of Likert data rely on theoretical assumptions to support their position. The robustness of parametric statistics enables the use of Likert data for parametric tests, even with small sample numbers and non-normal distributions (Knapp, 1990). If the Likert data contain at least four variables, the researcher should not be concerned about employing parametric statistical analysis (Baggaley & Hull, 1983).

Two types of quantitative studies can be performed on data of the Likert type. The first category includes scoring. Responses to questions are treated as numbers on a scale. They are not averaged over the items nor subjected to a factor or latent variable analysis. A respondent's score, whether weighted or unweighted, is used to measure a common property of the item set. The second type of analysis is concerned with ranking the relative significance of a group of

objects and how it may vary depending on the qualities of the individual (Dittrich et al., 2007). For a Likert scale to provide interval data, various conditions must be met, including the number of points and the use of the scale score as a composite score.

Number of Points

The most commonly used format is a 5-point scale ranging from 1 = strongly disagree to 5 = strongly agree (Jamieson, 2004; Croasmun & Ostrom, 2011). Some researchers prefer scales with 4 points (Williams, Burt, & Hilton, 2016), 6 points (Dolnicar & Grün, 2007), 7 points (Rotter, 1972; Cohen, Manion, & Morrison, 2000), 9 points (Amoo & Friedman, 2001; Carifio & Perla, 2007), and 11 points (Schwarz et al., 1991; Leung, 2011). The expression of rating for each point of the Likert scale is provided in Table 4.

Some claim that adding more points will bring the scale ever closer to a universal system (Hodge & Gillespie, 2007; Leung, 2011; Wu & Leung, 2017). A better Likert scale will result in a more representative outcome and a closer approach to the underlying distribution. The 11-point scale has good psychometric properties and easy comprehension (Leung, 2011). The number of scale steps increases, which induces respondents to use as few valid responses as possible (Matell & Jacoby, 1972). Social workers are encouraged to use 11-point Likert scales to increase generalizability, giving the subject a 0 to 10 score. If it can grow to eleven, it can be treated as a continuous measure and means that arithmetic operations can be used (Wu & Leung, 2017).

Other authors claim that the best way for the Likert scale to be reliable and valid is to use a 7-point scale (Luzano, Garcia-Cueto, & Muniz, 2008). The seven-point scoring system has good reliability, validity, sensitivity and accuracy, and good stability (Weng, 2004).

If the number of items counted exceeds the needed minimum, the gain in reliability would be so negligible that it would not be worthwhile to examine the difference or develop the instrument (Croasmun & Ostrom, 2011). However, the number of categories that may be established based on estimates of reliability is limited (Wakita, Ueshima, & Noguchi, 2012). In addition, a greater number of response possibilities may necessitate a greater mental effort from the respondent, hence diminishing response quality (Lee & Paek, 2014), response consistency (Fox & Jones, 1998), and systematic error (Lee & Paek, 2014). a number of research have demonstrated that answer quality declines above eleven options (Bendig, 1953). Simms et al. (2019) discovered no additional psychometric benefits as the number of response alternatives increased beyond six. The optimal number was therefore between four and six (Lee & Paek, 2014).

Table 4
Expressions of Rating for Each Points of the Likert Scale

No	Number of Points	Response Point	Anchors
1	4	1, 2, 3, 4	Strongly agree, agree, disagree, and strongly disagree
2	5	1, 2, 3, 4 ,5 -2, -1, 0, 1, 2	Strongly agree, agree, neutral, disagree, and strongly disagree
3	6	1, 2, 3, 4 ,5, 6	Strongly agree, agree, slightly agree, slightly disagree, disagree, strongly disagree
4	7	1, 2, 3, 4, 5, 6, 7	Completely disagree, generally disagree,

No	Number of Points	Response Point	Anchors
		-3, -2, -1, 0, 1, 2, 3	slightly disagree, neutral, slightly agree, generally agree, completely agree
5	9	1, 2, 3, 4, 5, 6, 7, 8, 9	Extremely Disagree,
		-4, -3, -2, -1, 0, 1, 2, 3, 4	……..……………….., Extremely Agree
6	11	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10	Extremely Disagree,
		-5, -4, -3, -2, -1, 0, 1, 2, 3, 4, 5	………..…………….., Extremely Agree

For the question, what should the ideal number of points be for a Likert scale? A study in India shows that the Likert scale with a 5-point scale may be preferred as it is easier to implement (Choudhury & Bhattacharjee, 2014). The use of 5 points is also confirmed by Finney and DiStefano (2006), but with some conditions. If the variables have five categories or more, and the data are approximately normally distributed, so treating the data as continuous in nature and employing Maximum Likelihood estimation for statistical analysis.

Development of Item and Respondent
To acquire relevant study findings, research employing the Likert scale must also examine the quality of the items and respondents. Items should be prepared using the most effective survey formats. It is essential to use a well-developed construct definition. Utilizing terms that the target audience understands will also be advantageous. The items require opinions, avoid harshly worded statements, and use response anchors that emphasize the construct being measured, as opposed to general agreement response anchors (Rickards, Magee, & Artino Jr., 2012; Joshi et al., 2015).

Therefore, when creating a Likert scale, researchers must pay close attention to the development procedure. According to Hair Jr. et al. (2019), there are five stages of development for attitude assessment scales, including the definition and understanding of the knowledge area, the literature study or expert interviews, theoretical/face validation, semantic validation, and statistical validation.

Conclusion
Likert data produces data intervals so that arithmetic operations can be carried out, including sums, means and standard deviations. All statistical methods, parametric and non-parametric, can be used to analyze the data, depending on the purpose of the study. Examples of statistical methods that can be used to analyze the Likert data are correlation and regression method, z test, t-test, analysis of variance, structural equational modeling, and factor analysis. However, the Likert scale produces interval data when the data generated are composite scores derived from multiple items. When developing a Likert scale, it is necessary to examine the instrument's and respondents' validity and reliability.

The Likert scale is a crucial rating scale and is very popular in social research. Its scale can measure latent variables that cannot be measured directly as physical variables. In addition, it is also easy to develop and does not require too complicated requirements. The process of measuring respondents' opinions using a Likert Scale is also straightforward to do. Respondents choose one of several alternatives presented according to their choice.

Limitations of This Study

This study has several limitations, one of which is that it is not based on our own research. The study was based on the findings of a number of academics in several social science domains, including education, health, and psychology.

Recommendations for Future Research

The implementation of the Likert scale in social science research has continued to increase in the last ten years. Most use the Likert scale as one of the essential scales in analyzing the data from their research to answer the research-posed problem. However, few pay attention to several prerequisites for its use, which can result in data bias. Finally, this research's findings uses an alternative solution as a guide in using the Likert scale in social science research. Furthermore, it is necessary to carry out further studies on applying the Likert scale to various aspects analyzed in a particular field.

References

Albaum, G. (1997). The Likert scale revisited: An alternate version. *Journal of Market Research Society*, *39*(2), 331-348. https://doi.org/10.1177/147078539703900202

Amoo, T., & Friedman, H. H. (2001). Do numeric values influence subjects' responses to rating scales? *Journal of International Marketing and Marketing Research, 26*, 41-46. Available at https://ssrn.com/abstract=2423064

Anastasi, A. (1976). *Psychological Testing* (1st Ed.). New York: Macmillan.

Armstrong, R. L. (1987). The midpoint on five-point Likert-type scale. *Perceptual and Motor Skills, 64*(2), 359-362. https://doi.org/10.2466/pms.1987.64.2.359

Baggaley, A. R., & Hull, A. L. (1983). The effect of non-linear transformations on a Likert scale. *Evaluation and Health Professions, 6*(4), 483-491. https://doi.org/10.1177/016327878300600408

Bendig, A. W. (1953). The reliability of self-ratings as a function of the amount of verbal anchoring and of the number of categories on the scale. *Journal of Applied Psychology, 37*(1), 38–41. https://doi.org/10.1037/h0057911

Bishop, P. A., & Herron, R. L. (2015). Use and misuse of the Likert item responses and other ordinal measures. *International Journal of Exercise Science, 8*(3), 297-302. Available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4833473/

Blaikie, N. (2003). *Analysing Quantitative Data*. London: Sage Publications.

Blanchard, R. D., Artino Jr. A. R., & Visintainer, P. F. (2014). Applying clinical research skills to conduct education research: Important recommendations for success. *Journal of Graduate Medical Education*, *6*(4), 619-622. https://doi.org/10.4300/JGME-D-14-00443.1

Bollen, K. A. (2002). Latent variables in psychology and the social sciences. *Annual Review of Psychology, 53*(1), 605-634. https://doi.org/10.1146/annurev.psych.53.100901.135239

Boone, H. N., & Boone, D. A. (2012). Analyzing Likert data". *Journal of Extension, 50*(2), 1-5. Available at https://www.joe.org/joe/2012april/pdf/JOE_v50_2tt2.pdf

Brown, J. D. (2011). Likert items and scales of measurement? *SHIKEN: JALT Testing & Evaluation SIG Newsletter, 15*(1), 10-14. Available at http://hosted.jalt.org/test/bro_34.htm

Carifio, J., & Perla, R. (2007). Ten common misunderstandings, misconceptions, persistent myths and urban legends about Likert scales and Likert response formats and their antidotes. *Journal of the Social Sciences, 3*(3), 106-116. Available at https://thescipub.com/abstract/10.3844/jssp.2007.106.116

Carifio, J., & Perla, R. (2008). Resolving the 50-year debate around using and misusing Likert scales. *Medical Education, 42*(12), 1150-1152. https://doi.org/10.1111/j.1365-2923.2008.03172.x

Carmines, E. G., & Zeller, R. A. (1979). *Reliability and validity assessment.* Beverly Hills: Sage.

Choudhury, S., & Bhattacharjee, D. (2014). Optimal number of scale points in Likert type scales for quantifying compulsive buying behaviour. *Asian Journal of Management Research, 4*(3), 432-440. Available at http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.431.5244&rep=rep1&type=pdf

Chyung, S. Y., Roberts, K, Swanson, I., & Hankinson, A. (2017). Evidence-based survey design: Use of a midpoint on the Likert scale. *Performance Improvement, 56*(10), 15-23. https://doi.org/10.1002/pfi.21727

Clason, D. L., & Dormody, T. J. (1994). Analyzing data measured by individual Likert-type items. *Journal of Agricultural Education, 35*(4), 31-35. Available at https://pdfs.semanticscholar.org/e2ad/36059a7894c 89ea566811eb82ad92acd88a7.pdf

Cohen, L., Manion, L., & Morrison, K. (2000). *Research Methods in Education*. London: Routledge Farmer. Available at https://gtu.ge/Agro-Lib/RESEARCH%20METHOD%20COHEN%20ok.pdf

Cox, E. P. (1980). The optimal number of response alternatives for a scale: A review. *Journal of Marketing Research, 17*(4), 407-442. https://doi.org/10.1177/002224378001700401

Croasmun, J. T., & Ostrom, L. (2011). Using Likert-type scales in the social sciences. *Journal of Adult Education, 40*(1), 19-22. Available at https://eric.ed.gov/?id=EJ961998

De Winter, J. C. F., & Dodou, D. (2010). Five-point Likert items: T test versus Mann-Whitney-Wilcoxon. *Practical Assessment, Research & Evaluation, 15*(11), 36-49. Available at http://citeseerx.ist.psu.edu/viewdoc/summary? doi=10.1.1.650.3292

Desselle, S. P. (2005). Construction, implementation, and analysis of summated rating attitude scales. *American Journal of Pharmaceutical Education, 69*(5), 97.

Diamantopoulos, A., Sarstedt, M., Fuchs, C., Wilczynski, P., & Kaiser, S. (2012). Guidelines for choosing between multi-item and single-item scales for construct measurement: A predictive validity perspective. *Journal of the Academy of Marketing Science, 40*(3), 434-449. https://doi.org/10.1007/s11747-011-0300-3

Dittrich, R., Francis, B., Hatzinger, R., & Katzenbeisser, W. (2007). A paired comparison approach for the analysis of sets of Likert-scale responses. *Statistical Modelling, 7*(1), 3-28. https://doi.org/10.1177/1471082X0600700102

Dolnicar, S., & Grün, B. (2007). Cross-cultural differences in survey response patterns. *International Marketing Review, 24*(2), 127-143. https://doi.org/10.1108/02651330710741785

Edmondson, D. (2005). Likert scales: A history. *Proceedings of the Conference on Historical Analysis and Research in Marketing, 12*, 127-133.

Finney, S.J. & DiStefano, C. (2006). Non-normal and Categorical data in structural equation modelling. In G. r. Hancock & R. O. Mueller (Hrsg.). *Structural equation modelling: a second course* (pp. 269–314). Greenwich, Connecticut: Information Age Publishing

Fox, C. M., & Jones, J. A. (1998). Uses of Rasch modeling in counseling psychology research. *Journal of Counseling Psychology, 45*(1), 30–45. https://doi.org/10.1037/0022-0167.45.1.30

Garland, R. (1991). The mid-point on a rating scale: Is it desirable? *Marketing Bulletin, 2*(1), 66-70. Available at https://www.rangevoting.org/MB_V2_N3_Garland.pdf

Gay, L. R., Mills, G. E., & Airasian, P. (2009). *Educational Research: Competencies for Analysis and Applications*. Columbus, OH: Merrill. Available at http://englishlangkan.com/produk/E%20Book%20Educational%20Research%20L%20R%20Gay%20Pearson%202012.pdf

Guy, R. F., & Norvell, M. (1977). The neutral point on a Likert scale. *Journal of Psychology, 95*(2), 199-204. https://doi.org/10.1080/00223980.1977.9915880

Hair Jr., J. F., LDS Gabriel, M., Silva, D. D., & Braga Junior, S. (2019). Development and validation of attitudes measurement scales: fundamental and practical aspects. *RAUSP Management Journal, 54*(4), 490-507. https://doi.org/10.1108/RAUSP-05-2019-0098

Harpe, S. E. (2015). How to analyze Likert and other rating scale data. *Currents in Pharmacy Teaching and Learning, 7*(6), 836-850. https://doi.org/10.1016/j.cptl.2015.08.001

Harwell, M. R., & Gatti, G. G. (2001). Rescaling ordinal data to interval data in educational research. *Review of Educational Research, 71*(1), 105-131. https://doi.org/10.3102/00346543071001105

Hinkin, T. R. (1995). A Review of scale development practices in the study of organizations. *Journal of Management, 21*(5), 967-988. https://doi.org/10.1177/014920639502100509

Hinkin, T. R. (1998). A brief tutorial on the development of measures for use in survey questionnaires. *Organizational Research Methods, 1*(1), 104-121. https://doi.org/10.1177/109442819800100106

Hodge, D. R., & Gillespie, D. F. (2007). Phrase completion scales: A better measurement approach than Likert Scales? *Journal of Social Service Research, 33*(4), 1-12. https://doi.org/10.1300/J079v33n04_01

Holt, G. D. (2014). Asking questions, analysing answers: Relative importance revisited. *Construction Innovation, 14*(1), 2-16. https://doi.org/10.1108/ci-06-2012-0035

Jain, B., Adil, G. K., & Ananthakumar, U. (2013). An instrument to measure factors of strategic manufacturing effectiveness based on Hayes and Wheelwright's model. *Journal of Manufacturing Technology Management, 24*(6), 812-829. https://doi.org/10.1108/jmtm-11-2011-0102

Jakobsson, U. (2004). Statistical presentation and analysis of ordinal data in nursing research. *Scandinavian Journal of Caring Sciences, 18*(4), 437-440. https://doi.org/10.1111/j.1471-6712.2004.00305.x

Jamieson, S. (2004). Likert scales: How to (ab)use them. *Medical Education, 38*(12), 1212-1218. https://doi.org/10.1111/j.1365-2929.2004.02012.x

Johns, R. (2010). Likert items and scales. *Survey Question Bank*: *Methods Fact Sheet 1*. Available at: https://ukdataservice.ac.uk/media/262829/discover_likertfactsheet.pdf

Joshi, A., Kale, S., Chandel, S., & Pall, D. K. (2015). Likert scale: Explored and explained. *British Journal of Applied Science & Technology, 7*(4), 396-403. https://doi.org/10.9734/BJAST/2015/14975

Knapp, T. R. (1990). Treating ordinal scales as interval scales: An attempt to resolve the controversy. *Nursing Research, 3*(2), 121-123. https://doi.org/10.1097/00006199-199003000-00019

Kuzon, W. M., Urbanchek, M. G., & McCabe, S. (1996). The seven deadly sins of statistical analysis. *Annals of Plastic Surgery*, *37*, 265-272. https://doi.org/10.1097/00000637-199609000-00006

Lautre, I, G., & Fernandez, E. A. (2004). A methodology for measuring latent variables based on multiple factor analysis. *Computational Statistics & Data Analysis, 45*(3), 505-517. https://doi.org/10.1016/S0167-9473(03)00037-9

Lee, J., & Paek, I. (2014). In search of the optimal number of response categories in a rating scale. *Journal of Psychoeducational Assessment, 32*(7), 663–673. https://doi.org/10.1177/0734282914522200

Leung, S. O. (2011). A comparison of psychometric properties and normality in 4-, 5-, 6-, and 11-point Likert scales. *Journal of Social Service Research, 37*(4), 412-421. https://doi.org/10.1080/01488376.2011.580697

Likert, R. (1932). The Method of Constructing an Attitude Scale, in Fishbein, M. (Ed) (1967) *Readings in Attitude Theory and Measurement*. New York: John Willey & Sons, Inc., 90 - 95.

Liu, J., Lin, H., Hu, B., Zhou, Z., Agyeiwaah, E., & Xu, Y. (2022). Advancing the understanding of the resident pro-tourism behavior scale: An integration of item response theory and classical test theory. *Journal of Business Research, 141*, 113-125. https://doi.org/10.1016/j.jbusres.2021.12.013

Luzano, L. M., Garcia-Cueto, E., & Muniz, J. (2008). Effect of the number of response categories on the reliability and validity of rating scales. *Methodology, 4*(2), 73-79. https://doi.org/10.1027/1614-2241.4.2.73

Martilla, J. A., & Carvey, D. W. (1975). Four subtle sins in marketing research. *Journal of Marketing, 39*(1), 8-15. https://doi.org/10.1177/002224297503900103

Matell, M. S., & Jacoby, J. (1972). Is there an optimal number of alternatives for Likert-scale items? Effects of testing time and scale properties. *Journal of Applied Psychology, 56*(6), 506–509. https://doi.org/10.1037/h0033601

McLeod, S. A. (2019). *Likert Scale Definition, Example and Analysis*. Retrieve from www.simplypsychology.org/likert-scale.html

Michalopoulou, C., & Symeonaki, M. (2017). Improving Likert scale raw scores interpretability with K-means clustering. *Bulletin of Sociological Methodology/Bulletin de Méthodologie Sociologique, 135*(1), 101-109. https://doi.org/10.1177/0759106317710863

Norman, G. (2010). Likert scales, levels of measurement and the "laws" of statistics. *Advances in Health Sciences Education, 15*(5), 625-632. https://doi.org/10.1007/s10459-010-9222-y

Prince, L. R. (2017). *Psychometric Methods: Theory into Practice.* New York: The Guilford Press.

Rickards, G., Magee, C., & Artino Jr., A. R. (2012). You can't fix by analysis what you've spoiled by design: Developing survey instruments and collecting validity evidence. *Journal of Graduate Medical Education, 4*(4), 407-410. https://doi.org/10.4300/JGME-D-12-00239.1

Rotter, G. S. (1972). Attitudinal points of agreement and disagreement. *The Journal of Social Psychology, 86*(2), 211-218. https://doi.org/10.1080/00224545.1972.9918619

Royeen, C. B. (1985). Adaptation of Likert scaling for use with children. *The Occupational Therapy Journal of Research, 5*(1), 59-69. https://doi.org/10.1177/153944928500500104

Sarafidou, J. O., & Chatziioannidis, G. (2013). Teacher participation in decision making and its impact on school and teachers. *International Journal of Educational Management, 27*(2), 170-183. https://doi.org/10.1108/09513541311297586

Schwarz, N., Knauper, B., Hippler, H. J., Noelle-Neumann, E., & Clark, L. (1991). Rating scales: Numeric values may change the meaning of scale labels. *Public Opinion Quarterly, 55*(4), 570-582. https://doi.org/10.1086/269282

Simms, L. J., Zelazny, K., Williams, T. F., & Bernstein, L. (2019). Does the number of response options matter? Psychometric perspectives using personality questionnaire data. *Psychological Assessment, 31*(4), 557–566. https://doi.org/10.1037/pas0000648

Singh, Y. K. (2006). *Fundamental of Research Methodology and Statistics*. New Delhi: New Age International (P) Ltd. Publisher. Available at https://epdf.pub/fundamental-of-research-methodology-and-statistics.html

Subedi, B. S. (2016). Using Likert type data in social science research: Confusion, issues and challenges. *International Journal of Contemporary Applied Sciences, 3*(2), 36-49. Available at http://www.ijcar.net/assets/pdf/Vol3-No2-February2016/02.pdf

Sullivan, G., & Artino Jr., A. R. (2013). Analyzing and interpreting data from Likert-type scales". *Journal of Graduate Medical Education, 5*(4), 541-542. https://doi.org/10.4300/JGME-5-4-18

Synder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of business research, 104*, 333-339.

Tastle, W. J., & Wierman, M. J. (2007). Consensus and dissention: A measure of ordinal dispersion. *International Journal of Approximate Reasoning, 45*(3), 531-54. https://doi.org/10.1016/j.ijar.2006.06.024

Torraco, R. J. (2005). Writing integrative literature reviews: Guidelines and examples. *Human Resource Development Review, 4*(3), 356-367.

Van Laerhoven, H., van der Zaag-Loonen, H., & Derks, B. H. F. (2004). A comparison of Likert scale and visual analogue scales as response options in children's questionnaires. *Acta Paediatrica, 93*(6), 830-835. https://doi.org/10.1111/j.1651-2227.2004.tb03026.x

Vigderhous, G. (1977). The level of measurement and "permissible" statistical analysis in social research. *The Pacific Sociological Review, 20*(1), 61-72. https://doi.org/10.2307/1388904

Viljoen, M. (2015). Constructing homogeneous Likert-type summative rating scales according to classical measurement theory. *Journal of Social Sciences, 43*(2), 143-151. https://doi.org/10.1080/09718923.2015.11893431

Wakita, T., Ueshima, N., & Noguchi H. (2012). Psychological distance between categories in the Likert scale: Comparing different numbers of options. *Educational and Psychological Measurement, 72*(4), 533-546. https://doi.org/10.1177/0013164411431162

Weng, L. J. (2004). Impact of the number of response categories and anchor labels on coefficient alpha and test-retest reliability. *Educational and Psychological Measurement, 64*(6), 956-972. https://doi.org/10.1177/0013164404268674

Williams, K. L., Burt, B. A., & Hilton, A. A. (2016). Math achievement: A role strain and adaptation approach. *Journal for Multicultural Education, 10*(3), 368-383. https://doi.org/10.1108/JME-01-2016-0005

Willits, F., Theodori, G., & Luloff, A. (2016). Another look at Likert scales. *Journal of Rural Social Sciences*, *31*(3), Article 6.

Wu, H., & Leung, S. O. (2017). Can Likert scales be treated as interval scales? - A Simulation study. *Journal of Social Service Research, 43*(4), 527-532. https://doi.org/10.1080/01488376.2017.1329775

Yusoff, R., & Janor, R. M. (2014). Generation of an interval metric scale to measure attitude. *Sage Open, 4*(1), 1-16. https://doi.org/10.1177/2158244013516768

Factors Affecting the Halal Cosmetics Purchasing Behaviour in Klang Valley, Malaysia

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The concepts of halal and haram in Islamic law are intended to protect humankind's general well-being. However, previous research focusing on halal cosmetics purchasing behaviour is very limited. Most of the previous research generally focuses on consumers' purchasing intentions towards halal cosmetic products instead of their relative purchasing behaviour. Therefore, the main purpose of this research is to investigate the relationships between adult consumers' halal awareness, halal knowledge, and attitudes towards their halal cosmetics purchasing behaviour. The subject of this research was adult consumers who live in the Klang Valley, Malaysia, and the sample was selected via a systematic sampling method. It was quantitative research, which was conducted by distributing a self-administrative questionnaire. The collected data was analysed using SPSS Version 28.0 and SmartPLS Version 3.3.9. The findings of the study show that halal awareness, halal knowledge, and halal attitude all have direct and significant relationships with halal cosmetics purchasing behavior. These findings can help marketers, particularly those in the halal industry, implement more appealing marketing strategies in order to increase their market share. Future research recommended that cosmetics manufacturers as well as the Malaysian government should apply for and design more high-impact educational programmes to raise halal awareness and increase halal knowledge about the benefits and trend of using halal cosmetic products in a bid to further improve the level of halal cosmetics purchasing behaviour .

Keywords: attitude, halal awareness, hlal knowledge, halal cosmetics, purchasing behaviour

Many things are related to halal and haram in Islamic teachings. This issue of halal and haram is ever-present in Malaysian society, particularly among Muslim consumers, as they are constantly confronted with issues that have caused numerous problems (Osman et al., 2020). Having said that, the fundamental idea of halal, in terms of the definition, the authorised logo, and other such things, is still unclear to some consumers. According to the Department of Islamic Development Malaysia (JAKIM), "halal" refers to what is permitted under Islamic Law. It applies to all actions conducted by the Muslim community, including the intake of halal

health and cosmetic goods. Alternatively, haram, which meaning illegal or banned, is the opposite of halal. In Islamic law, the ideas of halal and haram are designed to safeguard the common welfare of all people. In the context of Muslim consumerism, it is crucial for Muslims to know if a product is halal (legal) or haram (illegal) in order to prevent being fooled or exploited (Basit et al., 2021; Phuah & Wan Jamaliah, 2013).

In the context of cosmetics, the term halal encompasses numerous aspects. It begins with the ingredients used to create cosmetics and related items for complementary use by consumers and continues through the manufacturing process used to create the final product. All ingredients must be sourced from acceptable (halal) sources and prepared properly. Regarding halal certification, the stages include everything from preparation through slaughter, the use of the proper ingredients, cleaning, handling, processing, transportation, and distribution. Before being used or consumed, all items must be examined to ensure they have not come into contact with anything unclean or forbidden by Islam (Wahab, 2004). This is due to the fact that consuming haram (prohibited) foods can harm a person's health, alter their personality and spiritual capacities, and have a negative impact on their entire life (Nurdeng, 2009).

The halal industry has been fueled by the rising Muslim community and consumer purchasing power (Krishnan et al., 2017). According to the Department of Halal Certification EU's report for 2022, there is a growing demand for certified products due to the burgeoning global Muslim consumer population. According to the findings of Yousoof et al., (2020)'s study, Muslim consumers in Malaysia are now more concerned about the quality and safety of the products they use. Over the past few decades, Malaysia's halal business has expanded, integrating it into the global market. The government and business sectors are collaborating to expand the halal industry through various programmes including information exchange, funding, and training (Ministry of Trade and Industry (MITI), 2016). In addition, Malaysia provides a full ecosystem, a solid industrial development framework, efficient government institutions, a large array of food and non-food services, and reliable statistics on halal exports, investment, employment, and establishment via the Global Halal Support Centre (GHSC). GHSC is a subsidiary of MITI that was established to implement a strategic plan outlined in the Malaysian Halal Industry Master Plan with the goal of making Malaysia a global leader in the halal industry. According to the Halal Development Corporation Berhad, halal food and beverages remained the greatest contributor to the domestic halal economy in 2019, with RM22.05 billion. Following that, cosmetics and personal care products (RM2.95 billion), palm oil derivatives (RM1.26 billion), industrial chemicals (RM917.2 million), and medicines (RM400.9 million) contributed a total of RM12.64 billion (Business Today, 2020).

As the halal business has grown, more institutions and government groups have been set up to promote halal products, such as cosmetics, for both domestic and international markets. JAKIM was given the job of making a halal assurance procedure based on the halal requirements that companies must follow (Shafii & Zain, 2015). The Malaysian External Trade Development Corporation (MATRADE) was given the job of making sure that products like cosmetics are halal and promoting halal exports overseas (Kamaruzaman, 2008). In addition, organizations such as the Halal Industry Development Corporation (HDC) of the Malaysian Institute of Technology and Innovation (MITI), the Small and Medium Enterprise Corporation of Malaysia (SME Corp), the Malaysian Investment Development Authority (MIDA), the Ministry of Science, Technology, and Innovation (MOSTI), and the Malaysian Standard

Department are regarded as essential components in the process of elevating the halal industry to the position of world leader.

In the 11th Malaysia Plan, the initiative of the Malaysian government to turn Malaysia into a Worldwide Reference Centre for Halal Integrity and Centre for Innovation, Product and Sale for the production and trade of Halal goods and services in the global market is detailed (2016-2020). The relevant achievement may be seen in 2020, when Malaysia recorded a total of RM31 billion for Halal exports, exceeding the RM29 billion objective set under the first Halal Industry Master Plan (The Malaysian Reserve, 2021). As a result, the Malaysian government intends to maintain the Halal industry as a strategic industry in order to achieve the goals outlined in the Shared Prosperity Vision 2030, thereby increasing the distribution of wealth among the people by encouraging the growth of small and medium enterprises among the Bumiputera community. However, it is important to note that there are still a number of issues concerning consumer behaviour when purchasing Halal cosmetic products, such as their level of Halal awareness, Halal knowledge, and attitude, that should be addressed in the context of Malaysia.

The issue of halal and haram is made even more complicated by the diverse religious, ethnic, and cultural backgrounds of Malaysian society. However, previous research has shown that the level of consumer awareness, knowledge, attitude, and purchasing behaviour remains the primary factor influencing consumer purchasing behaviour (Osman et al., 2015; 2020). Regarding halal cosmetics, the extent to which awareness factors influence the purchasing behaviour of halal cosmetics is therefore still a matter of investigation. Previous research has focused on indicators such as attitudes, subjective norms, and perceptions of behavioural control (Haque et al., 2018), religious knowledge, religious commitment, and halal certification(s) (Shahid et al., 2022), product characteristics, social influence, and individual innovativeness (Narizan & Ahmad Badri, 2020), perceived value, trust, brand image, attitude, religious belief, and halal certification (Handriana, 2021). In terms of factors that influence awareness of halal cosmetics (Rahim et al., 2013; 2014) and the effect of awareness on attitudes, there were also studies on awareness with a different focus (Handriana, 2021). This study aims to examine the relationships between adult consumers' halal awareness, halal knowledge, and attitudes toward their halal cosmetics purchasing behaviour.

Literature Review
Halal Cosmetics Purchasing Behaviour
Purchasing behaviour can be defined as consumers' ability to make purchasing decisions for certain products and services accessible on the market (Rani, 2014). Meanwhile, according to Tan et al., (2021), Halal cosmetics are an innovation and revolution in the cosmetics industry since they deliver high-quality, halal-compliant goods (Islam, 2021). In the past, different types of research have looked at how people act when they buy halal cosmetics. For examples, science and technology (Hashim & Mat Hashim, 2013), Islamic marketing (Abd Rahman et al., 2015; Handriana et al., 2020; Islam, 2021; Khan et al., 2020; Widyanto & Sitohang, 2021; Shahid et al., 2018), management (Briliana and Mursito, 2017; Haque et al., 2018), humanities and social science (Arbak et al., 2019a; Arbak et al., 2019b), consumer and family economics (Husain et al., 2019), finance, economics and business (Sudarsono and Nugrohowati, 2020), signal processing and applications (Helmi et al., 2020), business and management (Majid et al., 2015), as well as legal, ethical and regulatory (Widjaja & Sijabat, 2021). The extent of the current research, which focuses on the scope of purchasing behaviour

for halal cosmetics, is quite limited. Most of the previous research generally focuses on consumers' purchasing intentions towards halal cosmetic products instead of their relative purchasing behaviour. Hence, this present research can be considered as a major contribution to the discovery of what is necessary to enrich the scarce literature on the relationship between halal awareness, knowledge, and attitude towards halal cosmetics purchasing behaviour.

Halal Awareness and Halal Cosmetics Purchasing Behaviour

Halal product awareness refers to the dissemination of information to the Muslim community in an effort to increase their level of understanding regarding food, beverages, and other items. According to Ambali and Bakar (2014), halal signifies interest, particular attention, or experience, in addition to knowledge of the concept. Literally, "awareness" in the context of halal refers to the sense of having a specific or experienced interest in something and/or gathering knowledge about what is currently occurring in regard to halal food, halal drinks, and other halal items. (Ambali & Bakar, 2014), and specifically halal cosmetics. A strong belief will make Muslim customers aware of the halal characteristics of the items they purchase (Shahid et al., 2018). Halal awareness also denotes a profound comprehension of religious duties, laws, and regulations, meaning that the halal items they eat are absolute and in conformity with Islamic law. However, Che Mohd Hashim and Musa (2014) found that halal awareness towards cosmetic is low as 'Halal' is not a priority among their samples. Consequently, the halal awareness variable in this study is defined as respondents' awareness of the significance of halal cosmetic items.

Halal Knowledge and Halal Cosmetics Purchasing Behaviour

Halal knowledge is one of the most basic concepts for Muslim consumers to grasp (Masood, 2021; Sugibayashi et al., 2019; Widyanto & Sitohang, 2021). Definition of knowledge according to Che Ahmat et al., (2011) and Sinclair (2010): facts, feelings, information, and abilities gained via experience or education, or familiarity with a fact or scenario gained through experience by a group or individuals. The present studies believe that halal knowledge is the extent to which Muslim customers comprehend the concept of halal. This aligns with the perspective of Nurcahyo and Hudrasyah (2017), who emphasized the necessity for halal education to empower consumers so that they are aware of what they put on their bodies and can make the proper decision. The knowledge of a product's halal status has a significant role in determining whether male and female customers accept or reject a product (Suki & Suki, 2018). The increased demand for halal cosmetics and medicines is primarily being driven by an increase in both male and female consumer awareness of halal practices. As they become more devout, they acquire greater halal knowledge when purchasing halal products (Jihan et al., 2013) and become aware of the halal in cosmetics products which will eventually develop a good attitude towards these halal products (Handriana et al., 2021). According to recent research conducted in Indonesia, halal knowledge has a substantial association with the use of halal cosmetic products (Herlina et al., 2020). It is necessary to have knowledge about halal in order to assess whether or not potential customers are familiar with the halal idea and system (Bashir et al., 2018). Concerns about halal, Islamic law, the legality of halal, and the halal procedure are examples of indicators (Maichum et al., 2017) are used to figure out how men and women will feel about a product and whether or not they will buy it.

Attitude and Halal Cosmetics Purchasing Behaviour

The foundation of attitude, according to Ajzen (2016), is constructed around the idea or beliefs incorporated in the model of attitude creation and structure. Attitude development is

influenced by a variety of factors, including behavioural performance, individual belief, personal assessment, and willingness to buy (Rehman & Shabbir, 2010; Abd Rahman et al., 2015). According to the principles of social psychology, an individual's attitude serves as the most accurate indicator of his or her behaviours or behaviour (Anubha, 2021; Farhat et al., 2019; Maulani et al., 2022). In spite of the fact that the halal cosmetic industry is very important for both manufacturers and customers, the majority of the research that has been done thus far has been on halal food goods, with just a few studies focusing on halal cosmetic products (Anubha, 2021; Handriana et al., 2021; Hassan & Harun, 2016; Ireland & Rajabzadeh, 2011; Maulani et al., 2022; Mukhtar and Butt, 2012; Teng & Wan Jusoh, 2013). Furthermore, none of the previous research have examined whether attitudes toward Halal cosmetic products influence consumers' purchase behaviour. A very recent study by Ngah et al., (2021) only examined at the intention to purchase level and they found that attitude has a positive effect on the intention to purchase halal cosmetics. Hence, the present researchers assumed that this current research which focussing on consumers on their Halal cosmetic products purchasing behaviour can act as a significant research in order to contribute to the body of knowledge, especially in the Malaysian context whereby halal issues are constantly debated in terms of sources, materials and processes that are suspected of affecting the halal status of products sold in the Malaysian market (Osman et al., 2020).

Based on the discussion on previous sections, the present research proposes that the following hypotheses should be examined in order to enrich the existing research literature, as illustrated in Figure 1.

H_a1: Halal awareness has a positive effect on adult consumers' Halal cosmetics purchasing behaviour.

H_a2: Halal knowledge has a positive effect on adult consumers' Halal cosmetics purchasing behaviour

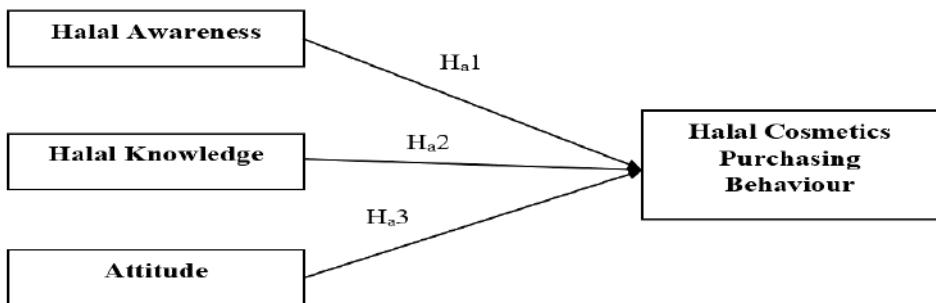H_a3: Attitude has a positive effect on adult consumers' Halal cosmetics purchasing behaviour

Figure 1. Research Framework.

Methods

Population and Sample

The research was carried out using a cross-sectional design. The target respondent for this research was the male and female adult consumers living in Klang Valley. Because Klang Valley is the most urbanized region in Malaysia, consumers have easy access to cosmetics (Nur & Sapir, 2021). The coverage of Klang Valley consists of Selangor state, Federal Territory of Kuala Lumpur, and Federal Territory of Putrajaya. According to Demographic Statistics Third Quarter 2021, Malaysia, the estimated total number of Klang Valley citizen was 8420700 (Department of Statistics Malaysia, 2021).

To ensure a statistically significant result, we calculated a suitable sample size using the sample size determination equation (Yamane, 1967). As a result, a total of 400 respondents were selected to participate in this research.

The health and beauty stores located at the five great malls of Klang Valley (Sunway Pyramid, Suria KLCC, Pavilion KL, and 1-Utama Shopping Centre), such as Guardian and Watsons, had been identified as the focal point for data collection because these malls were shortlisted as the five great malls of Klang Valley by the Malaysian Ministry of Tourism, Arts, and Culture in 2021 (Malaysia Convention & Exhibition Bureau, 2021).

Data Collection
On the actual date of data collection, the questionnaire was directly distributed and collected consecutively by intercepting every 10th consumer when they exited health and beauty stores at the selected shopping malls in Klang Valley, regardless of race, gender, language, or religion, using a systematic sampling method. The sample unit would consist of 10, 20, 30, 40, etc., until the desired number of survey respondents is attained. Other studies, including those by Azizan et al., (2022) and Srivastava and Kaul (2014), employed the same sampling method. The data collection was carried out on the weekends at 8 a.m. to 10 a.m. and at 4 p.m. to 6 p.m.

Depending on the respondents' willingness to participate in this study, the researcher had to identify possible participants using inclusive characteristics such as being Malaysian, 18 years or older, and having purchased halal cosmetic items within the last year. They were also instructed to respond as honestly as possible. Each respondent was given twenty to thirty minutes to complete the questionnaire. Those who completed the questionnaire received a token as a show of appreciation. At the end of the survey administration, there was a 97.25 percent response rate and 389 usable questionnaires. It was because each respondent had been asked for permission prior to the distribution of the questionnaire. During the question-answering session, the researcher assisted all respondents. Last but not least, additional data analysis was performed on all completed questionnaires.

Measures
In order to verify the survey and ensure its reliability, a pilot-test involving 30 participants was carried out. Responses were collected using the 5-point Likert Scale (1-Strongly disagree to 5-Strongly agree). There were five sections in the questionnaire: 1) demographic information related; 2) Halal cosmetics purchasing behaviour; 3) Halal awareness, 4) Halal knowledge; 5) attitude.

Halal cosmetics purchasing behaviour comprises nine items (e.g., "I always choose cosmetic products that have a Halal logo") which were adapted from George (2004). Halal

Awareness comprises seven items (e.g., "I am aware that the Halal logo is an important criterion in choosing a cosmetic product") which were adapted from Bashir (2019). Halal Knowledge comprises eight items (e.g., "for cosmetic products, I know Halal or non-Halal materials or content used") which were adapted from Abd Rahman et al., (2015). Attitude comprises eight items (e.g., "For me, choosing and buying Halal cosmetic products is something that must be practiced") which were adapted from Abd Rahman et al., (2015). The Cronbach alpha coefficient ranges from 0.772 and 0.921.

Data Analysis

A descriptive statistical analysis using SPSS software version 28.0 was carried out in order to ascertain the respondent demographic information. In addition, the partial least squares structural equation modelling (PLS-SEM) technique was utilised in order to test the presented hypothesis. Because of its many benefits, principal components structural equation modelling (PLS-SEM) is recommended over covariance-based structural equation modelling (CB-SEM). The prediction and exploration foundations of PLS-SEM and CB-SEM are substantially different from one another (Richter et al., 2016). CB-SEM is typically utilised for the purpose of confirming (or rejecting) hypotheses by establishing the extent to which a given theoretical model can estimate the covariance matrix for a sample data set. This is done by comparing the estimated covariance matrix to the original covariance matrix. It has captured the interest of empirical researchers throughout almost the entirety of the social science disciplines (Chin et al., 2003). Explaining the variance of the dependent variables is the primary emphasis of the PLS SEM analysis when it is applied to the model. PLS-SEM was used because of the innate adaptability it possesses for exploratory investigations, which was the primary purpose of this study (Ali et al., 2018).

Results

Respondents' Background

According to the data presented in Table 1, a total of 389 responses were received, with female respondents making up 61.20% (n = 238) of the sample and male respondents making up 38.80% (n = 151) of the sample. There were a total of 218 respondents whose ages varied from 21 to 30 years old, which represents 56.0% of the sample. Five of the respondents were older than 61 years old; 22 of the respondents (5.7%) was between 51 and 60. The sample had a total of 259 Malay respondents, making up 66.8% of the entire sample. The percentage distribution of the Chinese and Indian groups came next, with each of those groups accounting for 23.9 percent and 9.5 percent, respectively. 60.4 percent of respondents were unmarried (n = 235), compared to 39.3 percent of respondents who were married (n = 153). The average monthly income of households in the Klang Valley (n = 337) was less than RM4849, which is an 86.6 percent.

Table 1
Demographic profile of respondents (N = 389)

Item	Number of Respondent	Percentage (%)
Sex		
Male	151	38.8
Female	238	61.2
Age (years old) [a]		
≤ 20	27	6.9
21 – 30	218	56.0
31 – 40	92	23.7
41 – 50	25	6.4
51 – 60	22	5.7
> 61	5	1.3
Mean age = 30.1		
Median age = 25.0		
S.D = 10.5		
Minimum = 18		
Maximum = 66		
Ethnic Group [a]		
Malay	259	66.6
Chinese	93	23.9
Indian	37	9.5
Marital Status [a]		
Single	235	60.4
Married	153	39.3
Divorced / Separated / Widowed	1	0.3
Monthly Individual Income [a]		
≤ RM4849	337	86.6
RM4850 – RM10 959	51	13.1
> RM10 960	1	0.3

Evaluation of Measurement Results

Partial Least Squares Regression (PLS-SEM) structural equation modelling analysis was used to assess the research model in this study. Composite reliability and average variance extracted (AVE) are shown in Table 2, while the Fornell-Larcker criterion and the Heterotrait-Monotrait ratio of correlation are summarized in Tables 3 and 4, respectively.

If the composite reliability value is less than 0.70, it is not considered acceptable (Christie & Higgins, 2012; Nunnally & Bernstein, 1994). Due to poor factor loadings, seven items were eliminated. All of the composite reliability values in Table 2 fell into the range of 0.843 and 0.929. All of the composite reliability values for this study are more than 0.700, hence the measurements utilised should be considered reliable.

Convergent validity of a research model may be established if all of the AVE values are, preferably, more than the acceptable threshold value of 0.50 (Bagozzi & Yi, 1988). This threshold value specifies that at least fifty percent of the variation of the indicators should be accounted for in the measured constructs. Consequently, as shown in Table 2, all AVE values are over the threshold of 0.50. While the halal knowledge variable contributed the least to the AVE (0.520), it was still above the recommended threshold of 0.50 since the attitude variable

contributed the most (0.670). The findings therefore demonstrate the model's convergent validity.

Table 2

Assessment of measurement model results

Latent Variable	Items	Loadings	CR	AVE
Halal Awareness	B1	0.831	0.871	0.577
	B2	0.655		
	B5	0.733		
	B6	0.73		
	B7	0.832		
Halal Knowledge	C1	0.692	0.843	0.520
	C2	0.785		
	C3	0.649		
	C7	0.708		
	C8	0.761		
Attitude	D3	0.836	0.924	0.670
	D4	0.848		
	D5	0.84		
	D6	0.788		
	D7	0.79		
	D8	0.808		
Halal Cosmetics Purchasing Behaviour	E1	0.787	0.929	0.595
	E2	0.854		
	E3	0.84		
	E4	0.751		
	E5	0.776		
	E6	0.664		
	E7	0.732		
	E8	0.693		
	E9	0.822		

Square root of AVE is shown in Table 3, and variable correlations are shown in the off-diagonal. Accordingly, 0.795 was determined to be the value of the Fornell-Larcker criterion for the AWN variable. This number was greater than the Fornell-Larcker criterion in the column of AWN (0.791 and 0.644) and also greater than that in the row of AWN (0.792). A similar observation was also made for the ATT, DV, and KWG variables (Fornell & Larcker, 1981). Based on the explanation given by Hair et al., (2017), this has showed a good discriminant validity. Furthermore, all variables had a correlation value below 0.850 (Awang, 2014). Compared to the Fornell & Larcker criterion, the HTMT is considered more stringent and effective at detecting validity problems in variance-based SEM (Hair et al., 2017). The HTMT is determined in HTMT analysis by comparing the geometric mean of correlations between indicators measuring the same construct to the geometric mean of correlations between indicators measuring different constructs (Ali et al., 2018). The HTMT value should not exceed 0.90 (Hair et al., 2021). Table 4 shows that there is no issue with discriminant validity, as none of the results are higher than the 0.90 cutoff. As a result, the criteria for discriminant validity were met by all variables.

Table 3

Summary of Fornell-Larcker Criterion for the research

	ATT	AWN	HCPB	KWG
ATT	0.819			
AWN	0.776	0.759		
HCPB	0.802	0.776	0.771	
KWG	0.649	0.653	0.689	0.721

Note: AWN = Halal awareness; KWG = Halal knowledge; ATT = Attitude; HCPB = Halal cosmetics purchasing behaviour

Table 4

Summary of Heterotrait-Monotrait Ratio of Correlation (HTMT)

	ATT	AWN	HCPB	KWG
ATT				
AWN	0.897			
HCPB	0.874	0.878		
KWG	0.768	0.805	0.811	

Note: AWN = Halal awareness; KWG = Halal knowledge; ATT = Attitude; HCPB = Halal cosmetics purchasing behaviour

Evaluation of Structural Model Results

Research variables' collinearity was checked to rule out any lateral collinearity problems in the structural model (Hair et al., 2017). All inner VIF values in the structural model were below 5 (Hair et al., 2017), as shown in Table 5. This indicates that collinearity among the predictor constructs was not a problem. The significance of the path coefficients using the p-value and the R-squared value for the endogenous latent variable are used to evaluate the structural model (Hair et al., 2017). According to Hair et al., (2017), a value of 0.726 for the R^2 of halal cosmetic purchase behaviour is regarded high in behavioural research, indicating that halal awareness, halal knowledge, and attitude may account for 72.6% of the variance in halal cosmetic purchasing behaviour. The values for the size effect (f^2) are all within acceptable ranges (Boubker & Douayri, 2020). Furthermore, the Q^2 value for predictive relevance are greater than zero, indicating that the model has reasonable predictive quality (Hair et al., 2019). With a value of 0.657, the Goodness of Fit of the Model (GoF) is determined to be large (Wetzels et al., 2009). Evaluation of the structure model continues with a test of hypotheses by direct effect reporting via the product coefficients approach (Nitzl et al., 2016). In this study, we gave an exhaustive justification for the hypotheses we formulated. A direct effect between the independent variables (Halal awareness, halal knowledge, and attitude) and the dependent variable (Halal cosmetics purchasing behaviour) is depicted using PLS Bootstrapping in Figure 2 of this study.
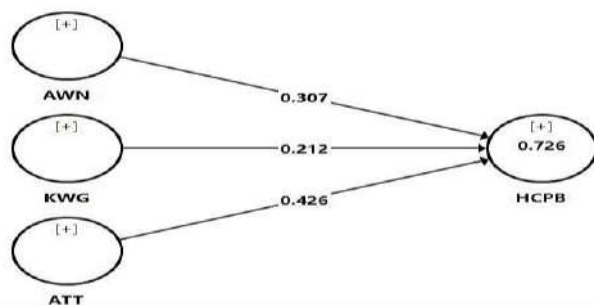
Figure 2. Results of assessment of structural model
Note: AWN = Halal Awareness; KWG = Halal Knowledge; ATT = Attitude; HCPB = Halal cosmetics purchasing behaviour

Using a bootstrapping technique with a resampling of 5000 (Hair et al., 2019), the direct effects as well as t-statistics were analysed and calculated for the hypothesised research framework. According to Figure 2 and Table 5, Halal awareness (β = .307, t = 5.771. $p < 0.01$), Halal knowledge (β = .212, t = 5.447, p < 0.01), and attitude (β = .426, t = 8.067, p < 0.01) positively affects halal cosmetics purchasing behavior, thus supporting H_a1, H_a2, and H_a3. The results therefore revealed that the attitude is the strongest predictor of halal cosmetic purchasing behaviour, followed by halal awareness, and halal knowledge.

Table 5
PLS bootstrapping for the direct effects between the independent variables and halal cosmetics purchasing behaviour

Hypothesis		β	T	95% CI	Supported	VIF	f²	Q²
H_a1	AWN → HCPB	0.307	5.771	[0.208, 0.423]	Yes	2.781	0.124	0.425
H_a2	KWG → HCPB	0.212	5.447	[0.145, 0.292]	Yes	1.912	0.086	
H_a3	ATT → HCPB	0.426	8.067	[0.323, 0.521]	Yes	2.756	0.240	

Note: H = Hypothesis; ATT = Attitude; AWN = Halal awareness; KWG = Halal knowledge; HCPB = Halal cosmetics purchasing behaviour; *** Significant at $p \leq 0.001$ level (2-tailed).

Discussion, Implications and Recommendations for Future Research

The results of this study were conclusive enough for the halal cosmetic industry to take into consideration the perspectives of adult customers regarding halal cosmetic products. As attitude was found to be the strongest predictor of the purchasing behaviour of adult consumers of halal cosmetics, followed by halal awareness and halal knowledge, it is essential for marketers to cultivate a positive attitude toward their products. This situation occurred in Klang Valley primarily as a result of their decision to use halal cosmetics due to the emphasis on hygiene in their products (Handriana et al., 2020). Consumer purchases will be influenced by their positive attitude about specific products and services on the marketplace (Haque et al., 2018). Hence, marketers in the halal industry should commercialise their cosmetic products by improving the image of their products and brand as a whole in order to attract a larger consumer group that is interested in purchasing halal cosmetics. This will allow the marketers

to capture a larger market share. Product qualities are important in marketing strategies because they act as an efficient communication medium between consumers and marketers. This makes product qualities an important component of marketing strategies. The halal product's quality has a significant impact on evaluative satisfaction. Therefore, in order to achieve desired marketing goals such as customer loyalty and satisfaction, marketers must produce a product of high quality for the market (Suhartanto et al., 2020). In these kinds of circumstances, marketers ought to link their cosmetics to more new added values, such as halal certification, following medical advice, and caring for animals, as one of their product and marketing strategies to grow their market shares. This should be done as part of their overall effort to expand their market shares.

Therefore, the findings of this study have broadened the previous research to improve general understanding of the awareness, knowledge, and attitude variables to the specific research area of Halal cosmetics purchasing behaviour. As a result, a new configuration finding in this current research, which would lead to fresh insights into the interrelationships between the studied variables. Because halal awareness, knowledge, and attitude have significant relationships with halal cosmetics purchasing behaviour, Malaysian manufacturers and the Malaysian government should apply for and design more high-impact educational programmes to raise awareness and knowledge about the benefits and trend of using halal products, particularly halal cosmetic products. These programmes should focus on raising awareness and knowledge about the benefits and trend of using halal cosmetic products (Sulaiman et al., 2022). Additionally, when compared to the other variables investigated in this study, attitude emerges as the most significant factor. Because of this, the findings of this research can be applied to the process of developing a more effective business strategy for the company. During the current COVID-19 pandemic, the manufacturing sector, in general, ought to give corporate social responsibility (CSR) measures their highest priority in order to improve consumer attitudes and purchase intentions. As a result, consumers in Malaysia could have a positive attitude and be more aware of selecting environmentally friendly halal cosmetics in their day-to-day lives. Businesses in the manufacturing industry should also allocate budgets to CSR in an effort to address these issues and improve their corporate image. This will allow them to generate a more affluent consumer group that is aware of the challenges that face the environment. At the same time, these businesses could lessen their carbon footprint to help protect the environment, and at the same time, society could be developed to become a low-carbon city by the year 2030. In order to make it one of the selling points that they use to convince customers to switch to halal cosmetics. This strategy aligns well with the Shared Prosperity Vision 2030 set forth by Malaysia as well as the Sustainable Development Goals.

From an academic standpoint, the current research would benefit future researchers by offering more insights that can improve their understanding about the behaviour of purchasing Halal cosmetic products, particularly the perceptions of both male and female consumers in Malaysia's Klang Valley. However, because the existing literature on Halal cosmetic products purchasing behaviour is relatively scarce in the context of Malaysia, more works in this area is welcome, especially to broaden the research scope by incorporating other aspects that are closely related to Halal cosmetic products in a more solid research work. For example, Halal supply chains, Halal logos, Halal certification, and Halal logistics aspects are all lacking from this current research. Future research will enrich the gaps.

Conclusion

In conclusion, numerous stakeholders in the halal manufacturing sector, such as sellers, buyers, manufacturers, and non-governmental organisations, would benefit from the current research because it would provide them with additional insights that would improve their understanding of the purchasing behaviour associated with halal cosmetics. These stakeholders include sellers, buyers, manufacturers, and non-governmental organisations. However, there is a scarcity of literature on the purchasing behaviour of halal cosmetic products in Malaysia. As a consequence of this, additional research in this field is encouraged, particularly for the purpose of broadening the scope of the research being conducted by incorporating other aspects that are closely related to halal cosmetic products into research that is more robust. In light of this, halal supply chains, halal logos, halal certification, and halal logistics considerations are not included in the current study. Subsequent research will fill in the gaps.

References

Abd Rahman, A., Asrarhaghighi, E., & Ab Rahman, S. (2015). Consumers and Halal cosmetic products: Knowledge, religiosity, attitude and intention. *Journal of Islamic Marketing*, *6*(1), 148-163. https://doi.org/10.1108/JIMA-09-2013-0068

Ajzen, I. (2016). Consumer attitudes and behavior: The theory of planned behavior applied to food consumption decisions. *Italian Review of Agricultural Economics*, *70*(2), 121-138. https://doi.org/10.13128/REA-18003

Ali, F., Kim, W. G., Li, J. J., & Cobanoglu, C. (2018). A comparative study of covariance and partial least squares based structural equation modelling in hospitality and tourism research. *International Journal of Contemporary Hospitality Management*, *30*(1), 416-435. https://doi.org/10.1108/IJCHM-08-2016-0409

Ambali, A. R. & Bakar, A. N. (2014). People's awareness on Halal foods and products: Potential issues for policymakers. *Procedia-Social and Behavioral Sciences*, *121*, 3-25. https://doi.org/10.1016/j.sbspro.2014.01.1104

Anubha (2021). Mediating role of attitude in halal cosmetics purchase intention: An ELM perspective. *Journal of Islamic Marketing*, print. https://doi.org/10.1108/JIMA-04-2021-0112

Arbak, S., Islam, R., & Al Rasyid, H. (2019a). Influence of Islamic advertising: Ethic violation on customer purchase intention of halal cosmetic products in Malaysia. *Humanities & Social Sciences Reviews*, *7*(3), 671-682. https://doi.org/10.18510/hssr.2019.7398

Arbak, S., Islam, R., & Al Rasyid, H. (2019b). Relationship between advertisement and purchase intention on Halal cosmetic products in Malaysia. *Humanities & Social Sciences Reviews*, *7*(3), 683-694. https://doi.org/10.18510/hssr.2019.73989

Awang, Z. (2014). *Research Methodology and Data Analysis* (2nd ed.). Universiti Teknologi MARA Shah Alam: UiTM Press.

Azizan, F. L., Ahmad, Z., & Afendi, N. A. (2022). Consumers' halal products purchase: An integration of TPB. *Insight Journal*, *9*(2), 21-32. https://doi.org/10.24191/insightjournal.v0i0.18473.

Bagozzi, R. P. & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the Academy of Marketing Science*, *16*(1), 74–94. https://doi.org/10.1007/BF02723327

Bashir, A. M. (2019). Effect of halal awareness, halal logo and attitude on foreign consumers' purchase intention. *British Food Journal*, *121*(9), 1998-2015. https://doi.org/10.1108/BFJ-01-2019-0011

Bashir, A. M., Bayat, A., Olutuase, S. O., & Latiff, Z. A. (2018). Factors affecting consumers' intention towards purchasing halal food in South Africa: A structural equation modelling. *Journal of Food Products Marketing*, *25*(1), 26-48. https://doi.org/10.1080/10454446.2018.1452813

Basit, A., Maroof, L., & Mian, H. (2021). Influence of religiosity on consumers buying intentions for Islamic banking products in Pakistan. *FWU Journal of Social Sciences*, *15*(4), 131-146.

Boubker, O., & Douayri, K. (2020). Dataset on the relationship between consumer satisfaction, brand attitude, brand preference and purchase intentions of dairy product: The case of the Laayoune-Sakia El Hamra region in Morocco. *Data in brief*, *32*, 106172.

Briliana, V. & Mursito, N. (2017). Exploring antecedents and consequences of Indonesian Muslim youths' attitude towards halal cosmetic products: A case study in Jakarta. *Asia Pacific Management Review*, *22*(4), 176-184. https://doi.org/10.1016/j.apmrv.2017.07.012

BusinessToday. (2020). Malaysia halal industry stays resilient despite challenging times. Retrieved on December 3rd, 2021 from https://www.businesstoday.com.my/2020/03/25/malaysia-halal-industry-stays-resilient-despite-challenging-times/

Che Ahmat, N., Mohd Radzi, S., Zahari, M. S. M., Muhammad, R., Abdul Aziz, A., & Ahmad, N.A. (2011). The effect of factors influencing the perception of price fairness towards customer response behaviors. *Journal of Global Management*, *2*(1), 22-38.

Che Mohd Hashim, A. J. & Musa, R. (2014). Factors influencing attitude towards halal cosmetic among young adult urban Muslim women: A focus group analysis. *Procedia - Social and Behavioral Sciences, 130*, 129-134.

Chin, W. W., Marcolin, B. L., & Newsted, P. R. (2003). A partial least squares latent variable modeling approach for measuring interaction effects: Results from a Monte Carlo simulation study and an electronic-mail emotion/adoption study. *Information systems research*, *14*(2), 189-217. https://doi.org/10.1287/isre.14.2.189.16018

Christie, B. & Higgins, P. (2012). *The impact of outdoor learning experiences on attitudes to sustainability: A Review of the literature*. Retrieved from University of Edinburgh website: Http:// anaturalcurriculum.org.uk/assets/Literaturereview-UofE.pdf

Department of Halal Certification EU (2022). *Why Halal Certification?* Retrieved from https://halalcertification.ie/certifications/why-halal-certification/

Department of Statistics Malaysia. (2021). Press Release – Demographic Statistics Third Quarter 2021, Malaysia. Retrieved on December 3rd, 2021 from https://www.dosm.gov.my/v1/index.php?r=column/cthemeByCat&cat=430&bul_id=N05ydDRXR1BJWVlTdDY4TldHd253dz09&menu_id=L0pheU43NWJwRWVSZklWdzQ4TlhUUT09

Farhat, K., Aslam, W., & Sany Sanuri, B. M. M. (2019). Predicting the intention of generation M to choose family takaful and the role of halal certification. *Journal of Islamic Marketing*, *10*(3), 724-742. https://doi.org/10.1108/JIMA-12-2017-0143

Fornell, C. & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, *18*(1), 39-50. https://doi.org/10.1177/002224378101800104

George, J. F. (2004). The theory of planned behavior and Internet purchasing. *Internet Research*, *14*(3), 198-212. https://doi.org/10.1108/10662240410542634

Hair, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., & Thiele, K. O. (2017). Mirror, mirror on the wall: A comparative evaluation of composite-based structural equation modelling methods. *Journal of the Academy of Marketing Science*, *45*(5), 616-632. https://doi.org/10.1007/s11747-017-0517-x

Hair, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., Danks, N. P., & Ray, S. (2021). Evaluation of reflective measurement models. In *Partial Least Squares Structural Equation Modeling (PLS-SEM) Using R* (pp. 75-90). Springer, Cham.

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, *31*(1), 2-24. https://doi.org/10.1108/EBR-11-2018-0203

Handriana, T., Yulianti, P., Kurniawati, M., Arina, N. A., Aisyah, R. A., Aryani, M. G. A., & Wandira, R. K. (2020). Purchase behavior of millennial female generation on Halal cosmetic products. *Journal of Islamic Marketing*, *12*(7), 1295-1315. https://doi.org/10.1108/JIMA-11-2019-0235

Handriana, T., Yulianti, P., Kurniawati, M., Arina, N. A., Aisyah, R. A., Aryani, M. G. A., & Wandira, R. K. (2020). Purchase behavior of millennial female generation on Halal cosmetic products. *Journal of Islamic Marketing*, *12*(7), 1295-1315. https://doi.org/10.1108/JIMA-11-2019-0235

Handriana, T., Yulianti, P., Kurniawati, M., Arina, N. A., Aisyah, R. A., Ayu Aryani, M. G., & Wandira, R. K. (2021). Purchase behavior of millennial female generation on Halal cosmetic products. *Journal of Islamic Marketing*, *12*(7), 1295-1315. https://doi.org/10.1108/JIMA-11-2019-0235

Haque, A., Anwar, N., Tarofder, A., Ahmad, N & Sharif, S. (2018). Muslim consumers' purchase behavior towards halal cosmetic products in Malaysia. *Management Science Letters*, *8*(12), 1305-1318. http://dx.doi.org/10.5267/j.msl.2018.9.009

Haque, A., Anwar, N., Tarofder, A., Ahmad, N., & Sharif, S. (2018). Muslim consumers' purchase behavior towards halal cosmetic products in Malaysia. *Management Science Letters*, *8*(12), 1305-1318. https://doi.org/10.5267/j.msl.2018.9.009

Hashim, P. & Mat Hashim, D. (2013). A review of cosmetic and personal care products: Halal perspective and detection of ingredient. *Pertanika Journals of Science and Technology*, *21*(2), 281-292.

Hassan, S. H. & Harun, H. (2016). Factors influencing fashion consciousness in hijab fashion consumption among hijabistas. *Journal of Islamic Marketing*, *7*(4), 476-494. https://doi.org/10.1108/JIMA-10-2014-0064

Helmi, R. A. A., Alkawaz, M. H., & Rahmat, S. N. (2020). Trusted Halal Application for Malaysian Cosmetic Products. In *2020 16th IEEE International Colloquium on Signal Processing & Its Applications (CSPA)* (pp. 1-6). IEEE.

Herlina, M., Rifai, N. A. K., Sholeh, N. S. M., & Kurniaty, N. (2020). Halal awareness of Muslim millennials toward cosmetics and skincare decision. *Advances in Social Science, Education and Humanities Research*, *409(SoRes 2019)*, 38-44.

Husain, R., Sarifah, R. S. S., & Zahari, S. M. (2019). Modelling the effects of Statistical Process Control Implementation on Halal cosmetics products. *Malaysian Journal of Consumer and Family Economics*, *23*, 1-22.

Ireland, J. & Rajabzadeh, S. A. (2011). UAE consumer concerns about halal products. *Journal of Islamic Marketing*, *2*(3), 274-283. https://doi.org/10.1108/17590831111164796

Islam, M. M. (2021). Evaluating negative attitudes of the students and shoppers towards halal cosmetics products. *Journal of Islamic Marketing*, *13*(3), 565-585. https://doi.org/10.1108/JIMA-03-2020-0067

Jihan, A., Mohd, C., & Hashim. (2013). Modeling the effects on the attitude of young adult urban Muslim women towards halal cosmetic products: New insights for championing the halal economy. *International Journal of Education and Research*, *1*(7), 1-8.

Kamaruzaman, K. A. (2008). Halal cosmetics between real concern and plain ignorance. *The Halal Journal, 3-4,* 26-28.

Khan, N., Sarwar, A., & Tan, B. C. (2020). Determinants of purchase intention of halal cosmetic products among Generation Y consumers. *Journal of Islamic Marketing*, *12*(8), 1461-1476.

Krishnan, S., Che Omar, C. M., Zahran, I., Syazwan, N., & Alyaa, S. (2017). The awareness of gen Z's toward Halal food industry, *Management*, *7*(1), 44-47. https://doi.org/10.1108/JIMA-11-2019-0248

Maichum, K., Parichatnon, S., & Peng, K.-C. (2017). The influence of attitude, knowledge and quality on purchase intention towards halal food: A case study of young non-Muslim consumers in Thailand. *IRA-International Journal of Management and Social Sciences*, *6*(3), 354-364. https://doi.org/10.21013/jmss.v6.n3.p3

Majid, M. B., Sabir, I., & Ashraf, T. (2015). Consumer purchase intention towards Halal cosmetics & personal care products in Pakistan. *Global Journal of Research in Business & Management*, *1*(1), 47-55.

Malaysia Convention & Exhibition Bureau. (2021). Five Great Malls of Klang Valley. Retrieved on May 3rd, 2022 from https://www.myceb.com.my/about-us/media-centre/publication/five-great-malls-of-klang-valley

Masood, A. (2021). Factors influencing halal cosmetics purchase behaviour of working adults and university students in Malaysia. *Jurnal Personalia Pelajar 24*(1), 113-127.

Maulani, M. R., Nuryakin, & Nur Hidayah (2022). Purchase intention of halal cosmetics: The mediating role of attitude. *Etikonomi, 21*(2), 383-398.

Ministry of Trade and Industry. (2016). World Halal Week 2016 (WHW 2016). Retrieved on May 3rd, 2022 from https://www.miti.gov.my/index.php/pages/view/3195

Mukhtar, A. & Butt, M. M. (2012). Intention to choose halal products: The role of religiosity. *Journal of Islamic Marketing*, 3(2), 108-120. https://doi.org/10.1108/17590831211232519

Ngah, A. H., Gabarre, S., Han, H., Rahi, S., Al-Gasawneh, J. A., & Park, S-h. (2021). Intention to purchase halal cosmetics: Do males and females differ? A multigroup analysis. *Cosmetics*, *8*(1), 19. https://doi.org/10.3390/cosmetics8010019

Nunnally, J. C. & Bernstein, I. H. (1994). *Psychometric theory,* New York: McGraw-Hill.

Nur, I. L. M. A., & Sapir, A. S. M. (2021). Halal cosmetic awareness among college students in Malaysia. *International Journal of Business and Economic Studies*, *3*(1), 17-26.

Nurcahyo, A. & Hudrasyah, H. (2017). The influence of halal awareness, halal certification, and personal societal perception toward purchase intention: A study of instant noodle consumption of college student in Bandung. *Journal of Business and Management*, *6*(1), 21-31.

Nurdeng, D. (2009). Lawful and unlawful foods in Islamic law focus on Islamic medical and ethical aspects. *International Food Research Journal*, *16*(4), 469-478.

Osman, S., Mohd Salleh, N., & Othman, M. (2015). *Laporan Akhir: Kajian Keprihatinan terhadap Konsep Halal dalam Pembelian Barangan Pengguna dalam Kalangan Mahasiswa*. Geran RUGS. Universiti Putra Malaysia

Osman, S., Zainuddin, N., & Zainalaludin, Z. (2020). Eksplorasi faktor pengaruh terhadap tingkah laku pembelian kosmetik halal dalam kalangan pengguna. *International Journal of Social Science Research, 2*(4), 32-43.

Phuah, K.T. & Wan Jamaliah, W.J (2013). Investigating Students Awarness and Usage Intention towards Halal Labelled Cosmetics and Personal Care Products in Malaysia, *4th International Conference on Business and Economic Research Proceeding*, Available at : www.internationalconference.com.my

Rahim, N. @ F., Shafii, Z., & Shahwan, S. (2014). Awareness and perception of Muslim consumers on halal cosmetics and personal care products. *International Journal of Business, Economics and Management*, *2*(1), 1-14. https://doi.org/10.18488/journal.62/2015.2.1/62.1.1.14

Rani, P. (2014), Factors influencing consumer behaviour. *International Journal of Current Research and Academic Review*, *2*(9), 52-61.

Rehman, A. & Shabbir, M. S. (2010). The relationship between religiosity and new product adoption. *Journal of Islamic Marketing*, *1*(1), 63-69. https://doi.org/10.1108/17590831011026231

Richter, N. F., Cepeda-Carrion, G., Roldán Salgueiro, J. L., & Ringle, C. M. (2016). European management research using partial least squares structural equation modeling (PLS-SEM). *European Management Journal, 34* (6), 589-597. https://doi.org/10.1016/j.emj.2016.08.001

Shafii, Z. & Zain, S. N. M. (2015). Halal Assurance Mechanisms in Halal Industry: An appraisal on its effectiveness towards continuous Halal assurance and the way forward. In *2nd International Conference On Education and Social Sciences (Intcess' 15)*. International Organization Center Academic Research.

Shahid, S., Ahmed, F., & Hasan, U. (2018). A qualitative investigation into consumption of halal cosmetic products: the evidence from India. *Journal of Islamic Marketing*, *9*(3), 484-503. https://doi.org/10.1108/JIMA-01-2017-0009

Shahid, S., Parray, M. A., Thomas, G., Farooqi, R., & Islam, J. U. (2022). Determinants of Muslim consumers' halal cosmetics repurchase intention: An emerging market's perspective. *Journal of Islamic Marketing*. https://doi.org/10.1108/JIMA-08-2021-0265

Sinclair, J. M. (2010). *Collins English Dictionary and Thesaurus*, 2nd edition, HarperCollins, Great Britain.

Srivastava, M., & Kaul, D. (2014). Social interaction, convenience and customer satisfaction: The mediating effect of customer experience. *Journal of retailing and consumer services*, *21*(6), 1028-1037. https://doi.org/10.1016/j.jretconser.2014.04.007

Sudarsono, H. & Nugrohowati, R. N. I. (2020). Determinants of the intention to consume halal food, cosmetics and pharmaceutical products. *The Journal of Asian Finance, Economics, and Business*, *7*(10), 831-841. https://doi.org/10.13106/jafeb.2020.vol7.no10.831

Sugibayashi, K., Yusuf, E., Todo, H., Dahlizar, S., Sakdiset, P., Arce, F. J., & See, G. L. (2019). Halal cosmetics: A review on ingredients, production, and testing methods. *Cosmetics*, *6*, 37. https://doi.org/10.3390/cosmetics6030037

Suhartanto, D., Dean, D., Sarah, I. S., Hapsari, R., Amalia, F. A., & Suhaeni, T. (2020). Does religiosity matter for customer loyalty? Evidence from halal cosmetics. *Journal of Islamic Marketing*, *12*(8), 1521-1534. https://doi.org/10.1108/JIMA-03-2020-0069

Suki, N. M. & Suki, N. M. (2018). Halal cosmetic products: Do knowledge and religiosity affect consumers' attitude and intention to use? *International Journal of Engineering and Technology*, *7*(4.38), 764-767.

Sulaiman, Z., Ahmad Sugiran, H. S., Hasbullah, N. N., Mas' od, A., Hashim, S., & Bradley, D. A. (2022). Public awareness of consumer products containing radioactive materials: Empirical evidence from Malaysia. *International Journal of Environmental Research and Public Health*, *19*(4), 2326-2344. https://doi.org/10.3390/ijerph19042326

Tan, B. C., Lau, T. C., Sarwar, A., & Khan, N. (2021). The effects of consumer consciousness, food safety concern and healthy lifestyle on attitudes toward eating "green". *British Food Journal*, *124*(4), 1187-1203. https://doi.org/10.1108/BFJ-01-2021-0005

Teng, P. K. & Wan Jusoh, W. J. (2013). Investigating student awareness and usage intention towards halal labelled cosmetics and personal care products in Malaysia. In *4th international conference on business and economic research (4th ICBER 2013)*, Indonesia, Bandung.

The Malaysian Reserve. (2021). Halal exports RM20b off the mark. Retrieved on December 3rd, 2021 from https://themalaysianreserve.com/2021/02/10/halal-exports-rm20b-off-the-mark/

Wahab, A. R. (2004). Guidelines for the preparation of halal food and goods for the Muslim consumers. *Amalmerge Halal and Food Safety Institute*.

Wetzels, M., Odekerken-Schröder, G., & Van Oppen, C. (2009). Using PLS path modeling for assessing hierarchical construct models: Guidelines and empirical illustration. *MIS quarterly*, 177-195.

Widyanto, H. A. & Sitohang, I. A. T. (2021). Muslim millennial's purchase intention of halal-certified cosmetics and pharmaceutical products: The mediating effect of attitude. *Journal of Islamic Marketing*, *13*(6), 1373-1394. https://doi.org/10.1108/JIMA-04-2020-0117

Yamane, T. (1967). *Elementary Sampling Theory*. New Jersey: Prentice Hall.

Yousoof, F. B. B. M., Jayaraman, K., & Munusamy, K. (2020). A study on awareness and intention to purchase halal cosmetics products among Malaysians. *International Journal of Entrepreneurship and Management Practices, 3*(10), 43-51.

Appendix

LEVEL OF AWARENESS OF HALAL CONCEPT IN COSMETIC PURCHASE

1. I am aware that the halal logo is an important criterion in choosing a cosmetic product.
2. The halal logo on cosmetic products means it is definitely halal.
3. Cosmetic products that come from Islamic countries must be halal.
4. Cosmetic products with Islamic names must be halal.
5. I am very aware of halal cosmetic products.
6. The halal principle is related to the hygiene and safety of cosmetic products.
7. I am always concerned about halal issues in the cosmetic products I buy.

KNOWLEDGE OF HALAL CONCEPT IN COSMETIC PURCHASE

For cosmetic products, I know….

1. the existence of recognized and unrecognized halal logos (by JAKIM) in the market.
2. to distinguish between recognized and unrecognized halal logos.
3. emulsifying ingredients (emulsifier) were halal or non-halal in that use specific codes such as E140, E422, etc.
4. ingredients such as preservatives and non-halal dyes are used.
5. halal or non-halal materials or content used.
6. ingredients categorized as alcohol.
7. halal logos of other countries recognized by JAKIM.
8. to evaluate the Malaysian halal logo recognized by JAKIM.

ATTITUDE TOWARDS HALAL ASPECTS IN COSMETIC PRODUCTS

1. I like to buy halal cosmetic products because of the hygiene element that is emphasized in its production.
2. For me, choosing and buying halal cosmetic products is something that must be practiced.
3. I am very concerned about the halal status of every cosmetic product I buy.
4. Religious obligations are my main concern when buying cosmetic products.
5. Buying halal cosmetic products makes me feel comfortable/confident to use them.
6. Buying halal cosmetic products makes me feel like I have become a true Muslim.
7. Buying halal cosmetics is my own choice.

8. For me, buying halal cosmetic products is one of the religious requirements.

BEHAVIOR OF PURCHASING HALAL COSMETIC PRODUCTS

1. I always choose cosmetic products that have a halal logo.
2. I am always meticulous with the halal logo on display when choosing cosmetic products.
3. I always buy cosmetic products that have a halal logo that is recognized by JAKIM.
4. I have never bought cosmetic products that contain non-halal ingredients.
5. I will not buy if I am not sure of the ingredients used in a cosmetic product.
6. When it comes to brands, I will buy halal cosmetics even if I am not familiar with the brand.
7. I would choose to buy halal cosmetic products even if they are quite expensive.
8. I always research the ingredients used in cosmetic products before buying them.
9. I will not buy cosmetic products if I have doubts about their halal status.

The Geo-Economics and Geopolitical Significance of Gwadar Port in the Changing Maritime Scenario

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China Pakistan Economic Corridor (CPEC) is a model project. The development of Gwadar port is an important part of it. This research posits the geo-economics and geopolitical importance of Gwadar port. A qualitative research approach (content analysis techniques) is used to examine the geo-economic effects of Gwadar port. This research has adopted a unique geo-economics theory approach to comprehensively examine Gwadar port's significance in China and Pakistan's economic and political relations. It follows the analysis of geographical, geopolitical, and economic determinants for the geo-economics, geopolitical, and maritime security significance of Gwadar port. Official reports and government documents are used for data analysis. The findings show that Gwadar port could be a solution to the economic security targets of China and Pakistan. China will gain economic, energy, and maritime security by finding an alternate, more secure route for the supply of oil and export of goods and better access to markets of Central Asia, Europe, and the USA. Moreover, Pakistan is expected to observe a significant rise in maritime trade capacity to support the dwindling economy. Furthermore, naval security will improve by reducing reliance on existing ports in Karachi, close to the Indian border .

Keywords: China, Pakistan, Gawadar Port, Maritime, Economic Security, Geopolitics, Energy Security

This research paper posits the geo-economics and geopolitical significance of Gwadar port for China and Pakistan in the context of the changing maritime scenario. Pakistan has more than 700 km of coastline long having significant strategic points: The ports of Karachi and Gwadar. The Karachi port is on the southeast side of Pakistan, sharing a border with India, whereas Gwadar port is on the south-western coast of Pakistan, sharing borders with Iran and Middle Eastern countries. The geostrategic position of Gwadar port is crucial due to its proximity to sea trade routes (Kalim, 2020). The location of Gwadar port provides an opportunity to choke, having key sea trade routes from Africa, and Europe through the Red Sea, the Strait of Hormuz, the Persian Gulf to East Asia, and the Pacific region making it even more vital for maritime trade route security. Gwadar is located in the Balochistan province on the western side of Pakistan. Although Balochistan is vital to

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successfully implementing the CPEC projects, Balochistan is facing socio-economic development, has the lowest per capita income, and contributes only 4.3% to the national GDP. Nevertheless, the province is rich in natural resources, and access to these resources through CPEC infrastructure development is expected to make this region attractive for investment. However, the volatile security conditions of this region are the biggest challenges to implementing CPEC development projects (Hussain & Jamali, 2019; Ishaq et al., 2017; Kuszewska & Nitza-Makowska, 2021). The terrorist groups, including Balochistan Liberation Army, seeking autonomous control over the province, have repeatedly attacked foreigners and local citizens, leading to a precarious security situation. The recent rise of the Taliban in Afghanistan further complicates the security of the situation in Balochistan.

Moreover, the challenges associated with the implementation of CPEC have been discussed by many researchers, but the economic and geopolitical significance of CPEC, particularly Gwadar port, has not been discussed in detail. The focus of most studies in this direction has remained on the economic benefits of CPEC for both countries. However, this research adopts a geo-economics theory perspective to comprehensively analyze the geostrategic importance of Gwadar port in accomplishing the political and economic benefits of CPEC and the BRI in general. The geo-economics means the geo-strategic use of economic power as a foreign policy tool and strategy to accomplish its geo-strategic and geo-political objectives (Li, 2020; Scholvin & Wigell, 2018; Wigell, 2016). Economic power played a dynamic role after the cold war era in international relations among power players in international politics.

Moreover, economic security is the top priority among national security preferences in the modern world. Several geopolitical and economic factors are used to analyze the significance of Gwadar port in the success of BRI and its implications for Pakistan and China. In addition, the economic security implications of Gwadar port are also discussed in detail. This paper examines the geo-economics and geopolitical significance of Gwadar port in the changing maritime scenario and dynamics. CPEC is a noteworthy mutual arrangement that can re-configure the geo-economics and geopolitics of the South Asian and Central Asian regions.

Geo-Economics Aspects of BRI

The BRI; the most remarkable economic development project of China, that aiming development in more than 140 countries to transform the lives of more than 60% of the world's population. It has received unprecedented attention at the global level and is widely discussed in political and economic development forums. In the international relations domain, several studies have analyzed BRI as a strategic tool to rise China's influence in the world in general and particularly in the region (Beeson, 2018; Gong, 2019; Li, 2020; Ohashi, 2018; Rahman, 2020). Wang (2016) highlighted that China had adopted a regional cooperation approach for transnational development in Asia, Africa, and Europe. On the contrary, studies by Benabdallah (2019), Parepa (2020), and Deng (2021) have used a cost-efficient approach to argue that inter-regional connectivity and trade benefits of BRI will lead to socio-economic development in the host countries.

Moreover, Gong (2019) and Liu (2020) argued that China adopted BRI in response to uncertain relations with neighboring countries in the region and the rising US influence over Asia. China has adopted "infrastructure diplomacy" to achieve its strategic objectives through connectivity projects and strengthen its relations with countries on its continental periphery (Garlick & Havlová, 2020; McConnell & Woon, 2021; Wilson, 2020). Thus, BRI

may be a dealing approach to ease regional security risks and increase Chinese influence in the regional and international world order.

Moreover, the neo-realist school provided another perspective to look at BRI, China considers the U.S. presence in Asia as a threat to its national security (Chan, 2017). That's why, in response to US influence in Asia, China has initiated plans like BRI, Chinese Dream, or Asia for Asians, and established Asian Infrastructure Investment Bank (AIIB) to project China as a norm maker in global governance. Through these initiatives, China has rebalanced the influence of the US and its allies in Eurasia and enhanced economic relations with BRI partner countries. In addition, China ensures energy security and the development of Western parts through BRI (Hussain, 2021; Klinger, 2020).

The debate about the primary objective of BRI bringing economic development or a grand political strategy for China is ongoing; however, the desegregation of geopolitical and economic motives is rather a futile effort. We have used both economic and geopolitical factors to adopt a geo-economics approach to analyze the political and economic significance of Gwadar port and its implications for the successful implementation of BRI.

Significance of CPEC in BRI

CPEC is a pioneer project under BRI. It is a mix of roads, railways, communication, energy, and industry development to be completed by 2030 with an investment of more than USD 62 billion (the details of the projects are presented in Map-1). Moreover, Gwadar port is a strategically significant point for the security of the Maritime Silk Route (MSR). Under the CPEC a 3000 km long road, as well as a railway line, will be developed from the Chinese city Kashgar to Balochistan, Gwadar. That will increase the foreign direct investment (FDI) of Pakistan. The flow of FDI into Pakistan and energy and infrastructure development are very helpful for the fragile economy of Pakistan. In addition to increasing the bilateral trade between China and Pakistan, CPEC is a gateway to Africa.

Projects under CPEC
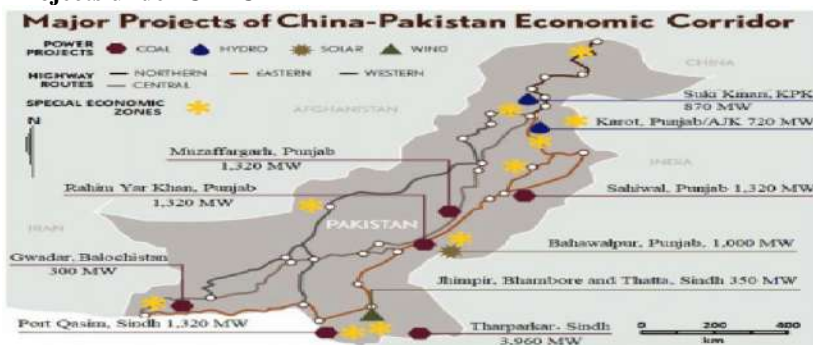
Source: (Ministry of Planning, Development, and Reform, 2017)

The CPEC is the pilot project of BRI, and it will have far-reaching implications on the economy and politics of the whole region, but notably, it can change the fate of Pakistan. According to estimates of Khan and Liu (2019), socio-economic development would be more evident in the regions along CPEC, and Balochistan will observe a rise of 6.4% in the social welfare index, followed by Sindh, KPK, and Punjab with an increase of 6.31%, 5.19%, and 3.5% respectively. The trade volume of Pakistan with its neighbors will increase more than three times its current trade and reach up to USD 58 billion per year (World Bank, 2020).

Moreover, CPEC is the gateway to Africa and the Middle East; therefore, it will work as a regional hub for trade activities, increasing tax collection and allowing convergence and spread of logistics, people, and information in the region.

The projects of CPEC are not just beneficial to China and Pakistan; rather, it offers valuable opportunities to Iran, Afghanistan, India, and the Central Asian region (Benabdallah, 2019). Besides trade benefits and development of China's Xinjiang province, CPEC will enhance the economic integration of south Asian countries to bring socio-economic and political stability. Thus, CPEC will enhance people-to-people contact, regional knowledge, cultural integration, business cooperation, and higher bilateral trade volumes. This win-win model of development will play a vital role in deciding the shared destiny of the region.

Theoretical Framework

The qualitative approach is utilized to analyze the Gwadar port in terms of its geo-strategic and geo-economic importance for BRI and CPEC. Data is collected from official documents, government reports, and developmental organizations. Geo-economics theory has been used to understand the developments (Gholizadeh et al., 2020; Kim, 2021). Several studies in the literature have investigated the Chinese motives behind BRI, focusing only on the political, geopolitical, or economic perspective. This hegemonic approach overlooks the interplay of economic, political, and geographic factors driving foreign policies in the modern world. According to Tsai and Liu (2017), economic security is the single most crucial concern, outweighing the earlier political and defense priorities, of the power players in international politics. Therefore, a geo-economic lens for analyzing foreign policy is the right approach to determining economic and geopolitical motives (Beeson, 2018; Gholizadeh et al., 2020). Thus, analyzing these developments using the geo-economics approach will enable us to understand the strategic space of Pakistan and the profound expansion of the strategy of China to increase its influence in global politics.

### Geo-Strategic Significance of Gwadar Port for China and Pakistan

Pakistan has remained attractive to global powers due to its strategic geographical importance. Pakistan shares borders with India, China, Afghanistan, and Iran in the east, northwest, west, and southwest, respectively, whereas the southern border, has the Indian Ocean. Pakistan connects South, West, and Central Asian countries with the western regions of China.

The total coastline of Pakistan is approximately 700 km, having two international seaports functional in Pakistan: Karachi and Port Qasim. The Karachi port has a 200 km distance from the Indian border. The foundation of Karachi port was established during the British colonial period and is the largest port in Pakistan in terms of commercial and military. Though, the security depth of this port is compromised by its proximity to the India-Pakistan border (Kalim, 2020). For instance, in the 1965 war, India blocked this port and caused a huge security problem for Pakistan. Similarly, in the 1971 war, India attacked Karachi port and inflicted massive damage to several parts of the port and merchant ships.

In addition, the demand growth shows that these ports' capacity will be insufficient in the future and expansion programs are slow, creating a gap in demand and supply. The rapid expansion of the residential area of Karachi city has created physical space limitations for Karachi port; therefore, expansion plans cannot keep pace with the rise in demand (Ali, 2019). On the other hand, port Qasim has no space limitations; however, the upstream location of this port 40km away from the open sea; increases the turnaround time for ships

and hampers further development of the port. This upstream location is not an issue for cargo shipments of industries near port Qasim; however, other locations have a cost disadvantage. Therefore, Pakistan has been pursuing the establishment of Gwadar port for a more secure passage to sea since 1964 (Gholizadeh et al., 2020; Kalim, 2020). Also, another international seaport to meet the rising demand is in the economic interest of Pakistan. Moreover, the demand is expected to escalate in the future; therefore, capacity for expansion should be part of the plan for Gwadar port.
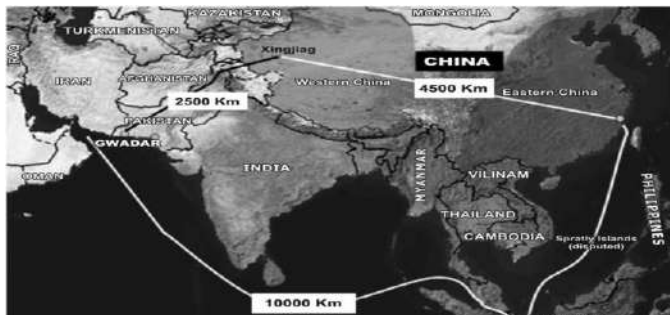
Source: Rahman et al, 2021.

The location of Gwadar port has several strategic advantages. The strategic importance of the geographical position of Gwadar port makes it central to the developments in CPEC and BRI. Gwadar port is located at the mouth of the maritime trade route that connects the Pacific, the Persian Gulf, and East Asia which is merely 400km distance from the global energy supply channel. That way, Gwadar port has the ability as a choke point of the global maritime trade route of the red sea and influence trade routes connecting Africa and Europe. The control over Gwadar port will ensure energy security in China, providing safe passage to oil supplies (Chang & Khan, 2019). Moreover, proximity to the Persian Gulf will increase influence over maritime routes to East Asia and the Pacific region. China is investing in more ports along the Arabian sea to increase its influence in this region of political instability (Daniels, 2013; Ejaz & Jamshed, 2018).

Traditionally, the US has remained influential in the Persian Gulf region, and it would not want to relax security in this region. Therefore, China has abandoned the Persian Gulf and avoided a conflict of interest with the US. However, Gwadar port allows China to bypass the Persian Gulf. Thus, bypassing the Persian Gulf has provided China access to oil from African countries, increasing its energy security.

Moreover, the naval vessels of several navies are looking after the route of the Indian Ocean, and the Chinese navy is one of them, particularly in the Somalian naval region (Brewster, 2015; Holmes & Yoshihara, 2008). These naval vessels get fuel resupply from ports of Yemen and other countries, but deficient supplies have remained an issue. At present, Gwadar port is developed only for trade purposes; however, in the future, it can certainly be used to help the Chinese people's liberation army (PLA) to preserve the security of trade happenings in the Indian Ocean region. Thus, Gwadar port is vital to safeguard Chinese foreign trade interests (Hussain et al., 2021).

Geo-Economics Significance of Gwadar port for China and Pakistan

More than 60% of the maritime trade of Pakistan takes place through Karachi port. Therefore, if tension on the Indian border escalates or even a new military conflict, which is not unprecedented given the long-term tension history of both states, could significantly

disrupt the economic activity at Karachi port and hurt the fragile economy of Pakistan. Recently, during the military confrontation with India in 2019, the Indian Minister of Defense warned Pakistan quoting events from the wars of 1964 and 1971 (Gholizadeh et al., 2020). Therefore, it is vital for the economic security of Pakistan that an alternative to Karachi port is developed to gain secure access to free waters. Thus, the development of Gwadar port will provide economic security to Pakistan by reducing its reliance on Karachi port (Kalim, 2020).

For years, East Asian countries have posed several challenges at regional and international levels. For instance, Japan, South Korea, and the USA have remained cautious of the rising influence of China through BRI and formed an economic coalition to restrict or derail China's economic growth (Bae, 2021; Cha, 2010). India is another emerging power in South Asia with concerns about Chinese influence in the region. In these challenging geopolitical and economic circumstances, China has strengthened its diplomatic and economic-based relations with Asian countries to use economic and commercial opportunities and keep up the pace of economic development (Beeson, 2018; Benabdallah, 2019). As part of this economic security strategy of China, CPEC being a pioneer project of BRI can perform a dynamic and vibrant part in the accomplishment of Beijing's economic security targets.

Gwadar port can provide economic and energy security to China. More than 55% of China's oil imports are from Middle Eastern and North African countries and export a massive quantity of goods to Middle Eastern, African, and European countries. The present maritime oil transportation route from the Middle East to China is 14490 km long. The shipments take two to three months to reach China, and there is no alternate route through the Indian Ocean and the Malacca Strait, making this maritime route a lifeline and security risk for the economy of China. Therefore, problems in this trade route can cause massive trouble for China's economic growth. The security of the trade route is important for China because of its economic growth and expansion of economic interest at the international level.

The Gwadar port is the shortest land route to China's Xinjiang province, saving transportation costs in trade activity (Conrad, 2017). The estimated reduction of transportation of goods and time is about 70% from Gwadar Balochistan to China and Central Asia (Anwar, 2020; Hussain, 2020). In addition, the railway connection from Gwadar to Kashgar will decrease 85% of the energy transportation mileage from the Middle East to China. Thus, a fully functional Gwadar port is an alternative to the Indian Ocean route as it connects China with the Strait of Hormuz and the Indian Ocean and provides energy and trade security (Gholizadeh et al., 2020; Hussain, 2020; Shibasaki et al., 2019).

Projects under CPEC

Investment in various areas	Investment in different Proportion	Total Investment Amount
Infrastructure	23.91 percent	$11 billion[21]
Development of Energy Resources	71.7 percent	$33 billion
LNG	4.34 percent	$ 2 billion[22]

Source: http://cpec.gov.pk

CPEC Infra-structure Projects in Pakistan

#	Project Name	Length (KM)	Estimated Cost(US$ M)
	Road		

#	Project Name		
1	"KKH Phase II (Thakot -Havelian Section)"	118	1,315
2	"Peshawar-Karachi Motorway" (Multan-Sukkur Section)	392	2,889
3	"Khuzdar-Basima Road" N-30 (110 km)	110	19.19 Billion Rupee
4	"D.I.Khan (Yarik) - Zhob Upgradation, N-50 Phase-I (210 km)"	210	76 Billion Rupee
5	"KKH Thakot-Raikot N35 remaining portion" (136 Km)	136	
	Rail Sector Projects		
6	"Expansion and reconstruction of existing Line" ML-1	1,830	6808
7	"Havelian Dry port (450 M. Twenty-Foot Equivalent Units)"		65

Source: The World Bank (2020)

Table 2

Energy Project in CPEC in Pakistan

#	Project Name	MW	Estimated Cost(US$ M)
1	"Sahiwal 2x660MW Coal-fired Power Plant, Punjab"	1320	1912.2
2	2×660MW "Coal-fired Power Plants at port Qasim Karachi"	1320	1912.2
3	"HUBCO Coal Power Project, Hub Balochistan"	1320	1912.2
4	"Engro 2x330MW Thar Coal Power Project"	660	995.4
	"Surface mine in block II of Thar Coal field, 3.8 million tons/year"		630
5	"Quaid-e-Azam 1000MW Solar Park (Bahawalpur) Quaid-e-Azam"	400	520
		600	781
6	"Hydro China Dawood Wind Farm(Gharo, Thatta)"	49.5	112.65
7	"UEP Wind Farm (Jhimpir, Thatta)"	99	250
8	Sachal, Wind Farm, (Jhimpir, Thatta)	49.5	134
9	Three Gorges, Second, and Third Wind, Power Project	100	150
10	"SSRL Thar Coal Block-I 6.8 mtpa & Power Plant" (2×660MW) (Shanghai Electric)	1320	1912.12
11	"HUBCO Thar Coal Power Project" (Thar Energy)	330	497.70
12	"ThalNova Thar Coal Power Project"	330	497.70
13	"Karot Hydropower Station"	720	1698.26
14	"Suki Kinari Hydropower Station, Naran, Khyber Pukhtunkhwa"	870	1707
15	"Matiari to Lahore ±660kV HVDC Transmission Line Project"		1658.34
16	"300MW Imported Coal Based Power Project at Gwadar, Pakistan"	300	542.32
17	"Thar Mine Mouth Oracle Power Plant (1320MW) & surface mine"	1320	Yet to be determined

Source: The World Bank (2020)

Moreover, China has also planned to transport oil from the Middle East to China through an oil pipeline passing through the Gwadar port. The Gwadar port will reduce the distance of transportation from 12000 km to 2395 km as well as it will reduce Chinese dependence on the Strait of Malacca, and the Indian Ocean. The proposed routes and present routes are explained in Table 2. Beijing has also planned to build facilities for storage and refining oil to transport via the land route to Xinjiang.

The Xinjiang province is relatively less developed, but access to international waters through Gwadar port will provide new business opportunities and improve the region's economic conditions (Gong, 2019; Rizvi, 2014). Moreover, economic development in western and northwestern China will eliminate all internal security challenges, and the involvement of people in political and economic activity in these parts of China will improve the security of the western region. Thus, Gwadar port is vital to the success of BRI to achieve the political as well as diplomatic purposes of China.

The present and proposed routes for energy supply to China

Route	Description	Name
"Western Africa" to "China"	"Maritime route"	Route A
The Middle East to China	Maritime route	Route B
Western Africa to Myanmar to China	Maritime and pipeline route	Route C
The Middle East to Myanmar, and China	Maritime and pipeline route	Route D
The Middle East to Pakistan, and China	Maritime and pipeline route	Route E

Source: Shaikh et al. (2016)

CPEC will also allow China to access markets of Central Asia and improve the economic outlook of northwestern regions. An on-shore oil pipeline is also part of CPEC that will ensure a smooth supply to western provinces of China. Thus, China will get an alternative to the "Strait of Malacca" for oil trade with Middle Eastern countries, and it is short and more secure than the pirate-infested maritime route of the "Strait of Malacca". The instability in maritime security of the South China Sea, East China Sea, and the Yellow Sea will improve, and western regions of China will gain economic development opportunities (Shibasaki et al., 2019; Wood, 2021). Moreover, 85% of oil trade traffic between the Middle East and China will reduce this pipeline.

In addition, the successful completion of Gwadar port and naval base in Gwadar will substantially enhance the energy and trade security of the maritime routes of China. Also, in the future Chinese naval fleet will enter the Indian Ocean to further strengthen the security of Chinese international waters. The energy supply which remains under threat by the US will be secured by the oil pipeline from Gwadar to Xinjiang (Garlick, 2018; Javed & Ismail, 2021). Therefore, the successful completion of these development projects will enhance China's maritime security, energy security, and economic security.

Port: Significance for China and BRI Projects
Since 2010, the alliance of the US with Asian countries, including Japan, the Philippines, and Vietnam, as part of the "re-Asia Pacific 2.0" strategy, has tried to create problems for China in the eastern and southern waters (Auslin, 2020; Liff, 2019). This alliance tried to encircle and squeeze Chinese activities to stall economic growth. However, China has avoided this collision by turning to the west to develop Gwadar port and bridged its connection with South Asian countries.

China has a surplus production and capital volume in the present economic order of the world, and China wants to avoid slowing down its economic growth (Clarke, 2017). Therefore, China can use Gwadar port to expand its production capacity and invest excess capital in maintaining its rapid economic growth. China is not new in port construction; it has vast experience, updated technology, and excess capital. On the other hand, Pakistan needs infrastructural development to optimize its abundant natural resources, low-cost labor, and a market that needs industrialization (Kalim, 2020; Shibasaki et al., 2019). Thus, the Gwadar port is a win-win option for both stakeholders.

Moreover, the development of Gwadar port is an important part of BRI that has the potential to become a hub of regional business activity. It serves the economic objectives of China and Pakistan and connects markets of South Asian, Central Asian, and Middle Eastern countries. Gwadar port is crucial for landlocked Central Asia because, through CPEC, the partner countries will gain access to free waters (Anwar, 2020; Khetran & Khalid, 2019). Moreover, the Gwadar port provides secure access to the Middle East which is an energy

supplies line and is undoubtedly a crucial addition to regional infrastructure. Moreover, the presence of the U.S. and Japan in the Strait of Malacca has led to creating an energy security concern for China, and developing Gwadar port will significantly reduce this dependence.

The Gwadar port is situated at the heart of Asian commercial maritime routes connecting the Middle East, Central Asia, and South Asia. The gateway of global energy supply is the Persian Gulf and the Strait of Hormuz, which are situated east of Gwadar port. According to the U.S. "Energy Information Administration (EIA)" the Strait of Hormuz a maritime route is used for more than 20% of the worldwide oil supply (EIA, 2020). Therefore, being at the choke point of this energy hub provides additional strategic benefits to Gwadar port.

Conclusion

Economic security is the top priority of the Chinese government, and due to recent economic threats, China has initiated the security of its maritime and land routes. Gwadar port is one such initiative as part of BRI. Gwadar port provides economic security against external threats, particularly in western China and South Asia. The economic benefits for Pakistan are also significant, and it will also provide better access to international waters. The geostrategic position also increases the importance of Gwadar port in China-Pakistan bilateral relations. Gwadar port will improve China's energy security by providing an alternative to the Malacca Strait maritime route. The Middle East and Russia are the leading suppliers of crude oil to China, and the crude oil from Russia is transported through an oil pipeline to western China. However, oil imports from the Middle East and North Africa use the maritime route of the Strait of Hormuz and Malacca Strait. Malacca Strait is strategically important in this route, and Singapore, Malaysia, and Indonesia claim sovereign positions over it. However, a recent coalition of the USA and Japan has tried to influence trade activity in the Malacca Strait. The fully functional Gwadar port will be an alternate route for Chinese oil imports. Ultimately, the "Strait of Malacca" will be replaced by Gwadar port soon and provide energy security to China.

On the other hand, Gwadar port and other infrastructural and economic developments under CPEC are vital to the "China-Pakistan friendship". These developments will improve the fragile economic conditions of Pakistan, and Kashgar will become the hub of economic activity in China, making it another Shanghai. The current trade route "China cargo to Shanghai through train to shipments through Malacca to Europe and Africa" will be replaced by "China Cargo to Kashgar through train to Gwadar through China-Pakistan railway to shipments to Europe and Africa". Thus, Gwadar will be the hub of trade activity in Pakistan, and Kashgar will be the new trade hub in China. The concentration of economic activity in Kashgar and energy imports through this route will improve the economic outlook of this relatively less developed northwestern part of China. That is why BRI is vital for the economic growth plans of China and regional development. Pakistan and China are neighbors and boast long-term friendships. Security is equally important for both countries. After developments under CPEC and its vital role in BRI, it can be said that "insecurity in Pakistan will also hurt China". The success of BRI depends on the completion and security of CPEC and Gwadar port. However, the secure and fully functional corridor will also bring huge benefits to the fragile economy of Pakistan. Therefore, the developed and fully functional Gwadar port will play an essential role in the region's geostrategic, geopolitical, and geo-economics conditions.

References

Ali, G. (2019). China-Pakistan Maritime Cooperation in the Indian Ocean. *Issues & Studies*, 55(03), 1-20.

Anwar, Z. (2020). Development of infrastructural linkages between Pakistan and Central Asia. *South Asian Studies*, 26(1), 103-115.

Auslin, M. R. (2020). *The US Alliance Structure in Asia Strategy in Asia* (pp. 73-91): Stanford University Press.

Bae, J. (2021). Reshaping US-South Korea-Japan Trilateral Relations from Trump to Biden and Beyond (pp. 91-109): Springer.

Beeson, M. (2018). Geo-economics with Chinese characteristics: The BRI and China's evolving grand strategy. *Economic and Political Studies*, 6(3), 240-256.

Benabdallah, L. (2019). Contesting the international order by integrating it: The case of China's Belt and Road initiative. *Third World Quarterly*, 40(1), 92-108.

Brewster, D. (2015). An Indian Ocean dilemma: Sino-Indian rivalry and China's strategic vulnerability in the Indian Ocean. *Journal of the Indian Ocean Region*, 11(1), 48-59.

Cha, V. D. (2010). Powerplay: Origins of the US alliance system in Asia. *International Security*, 34(3), 158-196.

Chan, L.-H. (2017). Soft balancing against the US 'pivot to Asia': China's geostrategic rationale for establishing the Asian Infrastructure Investment Bank. *Australian Journal of International Affairs*, 71(6), 568-590.

Chang, Y.-C., & Khan, M. I. (2019). China-Pakistan economic corridor and maritime security collaboration: A growing bilateral interests. *Maritime Business Review*, 4(2), 217-235.

Clarke, M. (2017). The belt and road initiative: China's new grand strategy? *Asia Policy*, 24(July), 71-79.

Conrad, M. P. B. (2017). China's access to Gwadar Port: Strategic implications and options for India. Maritime Affairs: *Journal of the National Maritime Foundation of India*, 13(1), 55-62.

Daniels, R. (2013). Strategic competition in South Asia: Gwadar, Chabahar, and the risks of infrastructure development. *American Foreign Policy Interests*, 35(2), 93-100.

Deng, Y. (2021). How China builds the credibility of the belt and road initiative. *Journal of Contemporary China*, 30(131), 734-750.

EIA. (2020). Short-Term Energy Outlook. Washington, DC: Energy Information Administration

Ejaz, A., & Jamshed, U. (2018). Review of China's Role in the Development of Gwadar Port. *Journal of Pakistan Vision*, 19(2), 270-280.

Garlick, J. (2018). Deconstructing the China-Pakistan economic corridor: pipe dreams versus geopolitical realities. *Journal of Contemporary China*, 27(112), 519-533.

Garlick, J., & Havlová, R. (2020). China's "Belt and Road" Economic Diplomacy in the Persian Gulf: Strategic Hedging amidst Saudi-Iranian Regional Rivalry. Journal of Current Chinese Affairs, 49(1), 82-105.

Gholizadeh, A., Madani, S., & Saneinia, S. (2020). A geo-economics and geopolitical review of Gwadar Port on belt and road initiative. *Maritime Business Review*, 5(4), 335-349.

Gong, X. (2019). The belt & road initiative and China's influence in Southeast Asia. *The Pacific Review*, 32(4), 635-665.

Holmes, J. R., & Yoshihara, T. (2008). China's naval ambitions in the Indian Ocean. *Journal of Strategic Studies*, 31(3), 367-394.

Hussain, F. (2020). Geostrategic Imperatives of Gwadar Port for China. *The Korean Journal of International Studies*, 18(2), 145-167.

Hussain, M. (2021). CPEC and Geo-Security behind Geo-Economics: China's master stroke to counter-terrorism and energy security dilemma. *East Asia*, 38, 313-332.

Hussain, M., & Jamali, A. B. (2019). Geopolitical dynamics of the China-Pakistan economic corridor: a new great game in South Asia. *Chinese Political Science Review*, 4(3), 303-326.

Hussain, S., Khan, F., & Ayaz, M. (2021). Politico-Economic Implications of CPEC on Pakistan. *FWU Journal of Social Sciences*, Winter 2021, Vol. 15, No.4, 149-164.

Ishaq, M., Ping, R. J., & Ahmed, B. (2017). Pakistan-China Economic Corridor (CPEC): Opportunities, Threats, and Challenges. *International Affairs and Global Strategy*, 52, 9-16.

Javed, H. M., & Ismail, M. (2021). CPEC and Pakistan: Its Economic Benefits, Energy Security and Regional Trade and Economic Integration. *Chinese Political Science Review*, 6(2), 207-227.

Kalim, D. (2020). Gwadar port: serving strategic interests of Pakistan. *South Asian Studies*, 31(1), 207-221.

Khan, S., & Liu, G. (2019). The China-Pakistan Economic Corridor (CPEC): challenges and prospects. *Area Development and Policy*, 4(4), 466-473.

Khetran, M. S. B., & Khalid, M. H. (2019). The China-Pakistan Economic Corridor: Gateway to Central Asia. *China Quarterly of International Strategic Studies*, 5(03), 455-469.

Kim, D. J. (2021). Making Geoeconomics an IR Research Program. *International Studies Perspectives*, 22(3), 321-339.

Klinger, J. M. (2020). Environment, development, and security politics in the production of Belt and Road spaces. *Territory, Politics, Governance*, 8(5), 657-675.

Kuszewska, A., & Nitza-Makowska, A. (2021). Multifaceted Aspects of Economic Corridors in the Context of Regional Security: The China-Pakistan Economic Corridor as a Stabilizing and Destabilizing Factor. *Journal of Asian Security and International Affairs*, 8(2), 218-248.

Li, M. (2020). The Belt and Road Initiative: geoeconomics and Indo-Pacific security competition. *International Affairs*, 96(1), 169-187.

Liff, A. P. (2019). Unambivalent alignment: Japan's China strategy, the US alliance, and the 'hedging 'fallacy. *International Relations of the Asia-Pacific*, 19(3), 453-491.

Liu, F. (2020). The recalibration of Chinese assertiveness: China's responses to the Indo-Pacific challenge. *International Affairs*, 96(1), 9-27.

McConnell, F., & Woon, C. Y. (2021). Mapping Chinese Diplomacy: Relational contradictions and spatial tensions. *Geopolitics*, 1-26. DOI: https://doi.org/10.1080/14650045.2021.1966417

Ministry of Planning Development and Reform. (2017). Long-Term Plan for China-Pakistan Economic Corridor (2017-2030). Islamabad: Government of Pakistan, Ministry of Planning Development and Reform.

Mir, A. (2018). What explains counterterrorism effectiveness? Evidence from the US drone war in Pakistan. *International Security*, 43(2), 45-83.

Ohashi, H. (2018). The Belt and Road Initiative (BRI) in the context of China's opening-up policy. *Journal of Contemporary East Asia Studies*, 7(2), 85-103.

Parepa, L.-A. (2020). The Belt and Road Initiative as continuity in Chinese foreign policy. *Journal of Contemporary East Asia Studies*, 9(2), 175-201.

Rahman, Z. U. (2020). A comprehensive overview of China's belt and road initiative and its implication for the region and beyond. *Journal of Public Affairs*, e2298.

Rahman, Z. U., Khan, A., Wang L.& Hussain, I. (2021). The geopolitics of the CPEC and Indian Ocean: security implication for India. *Australian Journal of Maritime & Ocean Affairs*, 13:2, 122-145, DOI: 10.1080/18366503.2021.1875807

Rizvi, H. A. (2014). The China-Pakistan Economic Corridor. *Strategic Studies*, 34(4), 1-17.

Scholvin, S., & Wigell, M. (2018). Power politics by economic means: Geoeconomics as an analytical approach and foreign policy practice. *Comparative Strategy*, 37(1), 73-84.

Shaikh, F., Ji, Q., & Fan, Y. (2016). Prospects of Pakistan-China energy and economic corridor. *Renewable and Sustainable Energy Reviews*, 59(June), 253-263.

Shibasaki, R., Tanabe, S., Kato, H., & Lee, P. T.-W. (2019). Could Gwadar Port in Pakistan be a new gateway? A network simulation approach in the context of the Belt and Road initiative. *Sustainability*, 11(20), 5757.

Tsai, T.-c., & Liu, T. T.-t. (2017). Cross-strait relations and regional integration: A review of the Ma Ying-Jeou era (2008-2016). *Journal of Current Chinese Affairs*, 46(1), 11-35.

Wang, Y. (2016). Offensive for defensive: the belt and road initiative and China's new grand strategy. *The Pacific Review*, 29(3), 455-463.

Wigell, M. (2016). Conceptualizing regional powers' geo-economics strategies: neo-imperialism, neo-mercantilism, hegemony, and liberal institutionalism. *Asia Europe Journal*, 14(2), 135-151.

Wilson, J. (2020). Infrastructure choices and the future of the Indo-Pacific. *Security Challenges*, 16(3), 64-68.

Wood, J. R. (2021). China's maritime strategy and national security in the South China Sea. *Intelligence and National Security*, 36(3), 444-450.

World Bank. (2020). Modernizing trade in Pakistan: A policy roadmap *Pakistan trade strategy development*. Washington, DC: The World Bank.

Trans-Regional Connectivity in Eurasia's Heartland and the Role of Uzbekistan

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Eurasia has been increasingly integrating mainly due to the Eurasian powers' collaboration. Uzbekistan occupies the heart of Eurasia's heartland having borders with all Central Asian Republics including Afghanistan. The land locked nature of the country induces it to search for outlets towards regional and global markets to capitalize upon its tremendous growth for expanded development. Pakistan provides the most economical and historical outlet to Uzbekistan and to the Eurasian heartland via Afghanistan. Despite having a common past the countries of Central and South Asia are least integrated in the contemporary era. Pakistan and Uzbekistan also realize that Central and South Asian connectivity via Afghanistan will help build a solid basis for sustainable peace, stability and prosperity in Afghanistan. Uzbekistan is part of important transportation corridors linking the Eurasian heartland in all directions. Pakistan has framed "Vision Central Asia Policy" and envisaging Pakistan-Afghanistan-Central Asia Corridor to supplement CPEC in fundamentally changed regional geo-political and geo-economic circumstances. The paper mainly argues that the changed regional and global state of affairs make the regional environment conducive for enhanced connectivity between Central and South Asia via Afghanistan while Pakistan and Uzbekistan have to play leading roles necessitated by their significant geographical locations in respective regions in an altered regional scenario .

*Keywords***:** Uzbekistan, Trans-Regional Connectivity, Eurasian Integration, Trade, Economic Corridors

Connectivity has been termed as the arms race of the Twenty First Century (Khanna, 2016). All the major powers have framed their connectivity and integration plans in this regard particularly in the Eurasian space. These are USA's New Silk Road, Russia's Eurasian Economic Union and China's Belt and Road Initiative. Connectivity, therefore, has been the driving force behind transformational changes in the Eurasian heartland. Russia-China cooperation and understanding is facilitating the Eurasian integration. This cooperation between the dyad was absent during the last century. As a matter of fact, a country has to be first connected regionally if it has to efficiently connect globally. It is particularly true for the land locked countries like Uzbekistan. Unfortunately despite having common past the two regions of Central and South Asia are least connected in contemporary era. The important factors that contribute to better prospects for enhanced connectivity between Pakistan and Central Asia are; the end of war in Afghanistan, the geographical landscape and the region's diverse resource endowment. For example Krugman finds that the characteristics of the geographic landscape and resource endowments have a profound effect on states' trade and economic behavior in a region (Krugman,1991). Eurasia's heartland is significant due to its resource base and

geography. Uzbekistan occupies heart of the heartland, borders all Central Asian Republics including Afghanistan while Pakistan provides an economic and historical outlet to the heartland i.e. Central Asia towards South Asia, Arabian Sea and beyond. The Central Asian Republics, since independence, are looking for an outlet via stable Afghanistan (Saito, 2022). The regional circumstances in post-US/NATO withdrawal period make the regional environment conducive for strengthening regional cooperation on Central and South Asia connectivity. This particular work attempts to briefly discuss the reasons behind rapidly increasing Eurasian space, the exceptional economic performance of Uzbekistan since independence and thereafter looks into the Republic's role in regional and trans-regional integration and connectivity necessitated by its economic growth, its geography and the altered regional geo-political and geo-economic state of affairs. The paper also revisits Pakistan-Uzbekistan relations and connectivity in a changed regional geo-political configuration. What are the main factors that propel the regional connectivity and inducing Uzbekistan, Pakistan and other regional states towards enhanced connectivity? How does Halfords Mackinder's heartland theory seem to be materializing in the 21st century? What are the prospects of Pakistan-Uzbekistan-Central Asia connectivity via Afghanistan? These are some of the questions this work attempts to answer. The research work is qualitative in nature based on hermeneutics and double hermeneutics research methods by utilizing the secondary sources.

Uzbekistan's Exceptional Economic Performance

Since 1991, Uzbekistan has remained an exception with in Central Asian region for its economic transformation, growth and development. During the economic, political and social transitions of the 1990s, Uzbekistan's economic performance was best amongst the dozens of post-Soviet transitional economies. The economic contraction was least in comparison to all other former Soviet states including Central Asian Republics(CARs). Uzbekistan was the first Central Asian Republic to turn the economic growth positive in 1995 and achieve the pre-independence (1989) growth level by the year 2000 while Kazakhstan achieved it a year later by 2001 (Khan, 2008, Winter). Uzbekistan adopted a gradual reform policy termed as "Uzbek Model" by prioritizing economy over politics with a prudent guiding role of the state. The revenue earned by the strategic sub-sectors of the economy such as cotton and gold was invested in other important sectors i.e. oil and gas were financed with. The country ceased importing oil and gas by as early as 1996 to save precious foreign exchange. Similarly land under grain cultivation particular wheat was increased to make the country self-sufficient in grain production which was yet another huge import. Since then Uzbekistan has never looked back and today inter-city bullet trains are operational. "The Afrasiyab bullet-train" has effectively diminished the distance of 5 hours between Tashkent and Samarkand which the author traveled in a car during 1995 to just two hours experienced in September, 2021. Another line has been developed and added to Metro – the underground train network - providing swift and comfortable transportation to the capital city. The Metro has been a great service to the residents of Tashkent while at the same a source of revenue to the government. The economy of Uzbekistan has grown at an average rate of 7.2 percent during the last fifteen years (2005-2020) (Macrotrends, 2021) which is quite impressive. Despite the Pandemic, Uzbek economy has achieved tremendous economic growth i.e. 16.4% during 2017-2020 (Macrotrends, 2021). This tremendous growth has been translated into infrastructural development across the country generating further economic activity and productivity. Kirshi (Shakhr e Sabz) in Kashkadarya has been newly built and ancient Islamic architecture of Amir Temur era has been renovated and preserved as Uzbek National Heritage. This the author personally observed while visiting ShakhreSabz for participating in international conference on Amir Temur in September, 2021.

Navoi airport at Termiz, railway line from Termiz to Mazare Sharif in Afghanistan and development of Hilton city along with dozens of five stars hotel in Tashkent are glaring example of transforming growth into infrastructural development for increased economic activity. Uzbekistan has also increasedthe share of industrial sector in national GDP recently which few other transitional economies could do. In addition the Republic has upgraded the structure of industrial output as the share of machinery, equipment and chemicals has increased in the total industrial production (Popov, 2013, July 30)."Obod Kishlak", "prosperous village" like programs and enhanced spending on social protection are possible due to the increased economic activities and job creation in the economy. The three important milestones achieved by Uzbekistan:

i. To become self-sufficient in food

ii. To become net energy exporter and

iii. To increase share of industry in GDP and share of machinery and equipment in the total industrial production and exports (Popov, 2013 July 30).

Uzbekistan has been executing mega projects such as airports, highways, railways and infrastructure for free economic zones and transport and logistics centers to better fit in the international transportation system (Islamov, 2013).

This tremendous economic growth compels Uzbekistan to search for outlets for expanded development to maximally benefit from the country's resource base and trade potential. Uzbekistan realizes that stable Afghanistan in the neighborhood is a pre-requisite for sustainable development and connectivity in the southern direction towards sea lanes of communication. Connectivity between Central and South Asia via Afghanistan will also serve an important purpose in regional security interests i.e. to bring sustainable peace and development to Afghanistan. Uzbekistan has assumed a leading role in this regard under the government of Shavkat Mirziyoyev.

The Eurasian Integration in 21st Century

The 21st century can be termed as Eurasian Century as the Eurasian landmass has been rapidly integrating. Eurasia in terms of landmass includes multiple regions of Europe, Central and South Asia and West and East Asia. For this reason Eurasian integration is viewed as a trans-regional integration. The Eurasian landmass for instance has been defined in terms of its heartland, islands and rim-land. Two factors are instrumental in realizing Halfords Mackinder's Heartland Theory in the 21st Century as opposed to the last century. First the technological developments and secondly the synergies, understanding and cooperation developed between the Eurasian states particularly between the two main Eurasian Powers i.e. Russia and China surrounding almost entire Eurasian Heartland (khan, 2021). Importantly the two neighboring powers have developed synergies in Central Asia which is not the case with other powers engaged in the region or trying to engage meaningfully. Both the countries seem unanimous on keeping their backyard i.e. Central Asia stable and developed. Importantly Russia and China are playing in Central Asia according to local rules by supporting governments in Central Asian Republics in contrast to USA's condemnations and political interferences on human rights and democracy issues (Cooley, 2012). Indeed the color revolutions in former Soviet space and in Kyrgyzstan cautioned the CARs vis-à-vis the West. USA currently engaged in the region through C5+1 format has to productively play its role in connectivity infrastructure and need not

be viewed solely as countering Russia and China in the region through a transitory and transactional approach (Tolipov, 2015).

The Eurasian integration may transfer huge portion of world trade to trans-continental trade corridors making Central Asia a transit bridge between Asian, African and European continents. This will thus result in power shift from Sea Powers to Land Powers (Diesen, 2018). The Eurasian heartland i.e. Central Asia as a result is being connected in all directions becoming land linked region instead of land locked. The major powers like Russia, China, USA and European Union all have framed their own integration plans i.e. Eurasian Union, BRI, New Silk Road and the relatively older TRACECA (Transport Corridor-Europe-Caucasia-Asia) respectively. Similarly there are bilateral and multilateral trans-regional integration arrangements along with connectivity plans of regional, sub-regional and international organizations such as ECO, SCO and CAREC. In this context the Eurasian heartland i.e. Central Asia has gained added significance to effectively and efficiently connect the Eurasian landmass. The regional and sub-regional organizations need to coordinate their policies for physical infrastructure development to effectively develop cross-border infrastructure, hard and soft.

Uzbekistan's Role in Trans-Regional Connectivity

Uzbekistan after consolidating its nation and state hood with strong, diversified and dynamic economy looking beyond the borders to capitalize on its geographical location in the heart of Central Asia in order to enhance regional and trans-regional connectivity in this era of Eurasian Integration. The Republic has assumed leadership role in Central Asia to enhance regional cooperation and connectivity (Imamova, 2021). The Government of Uzbekistan since 2017 has made regional cooperation and connectivity main focus of its foreign policy. Uzbekistan is currently participating and implementing the policy of (TRACECA) Inter-Governmental Commission 2026 Strategy through Master and Action Plan 2018-2020 (Islamov, 2020, February). Uzbekistan welcomes the proposals of other partner countries to enhance trans-regional transportation corridors under the TRACECA.Uzbekistan occupies the Centre of Eurasian Heartland having borders with all CARs including Afghanistan. The Government of Uzbekistan has embarked on a fundamentally changed foreign policy with a focus on inter and intra-regional cooperation within Central Asia and with South Asia by the promotion of peace and development in Afghanistan. It is important that CARs develop regionalism on the basis of trade and economic relations which will pave the way for regional cooperation on the foreign policy and security related issues. Uzbekistan has been maintaining balance in its relations with major powers like Russia, China, USA and Europe to benefit from their investment, trade and transfer of technologies. The new initiatives undertaken by President Mirziyoyev have been focusing on augmenting foreign trade and economic relations, amicably resolving border and water issues in Central Asia and facilitating smooth border crossings for enhanced trans-regional trade and economic connectivity (GCRF, 2020, February). The Consultative Forum has been revived with the efforts of Shavkat Mirziyoyev amongst the leaders of CARs which is instrumental in resolving water and border issues in consultation and mutual understanding (Nematov & Umarova, 2021).

The enhanced cooperation in Central Asia serves two pragmatic interests and objectives for the region. First Central Asia will be viewed as a single large market with smooth border crossing by the investors and traders and secondly CARs will maximally benefit from the integration plans of the major powers. It is through regional cooperation that the natural wealth of the region can be translated into inclusive growth and development. Uzbekistan also aims to address the region-wide security issues in jointly coordinated manner to pave the way for

sustainable peace and development as both are imperative and neither can be achieved without the other. Afghanistan is the regional corner stone.The countries of Central and South Asia have strong incentive to support peace and stability in Afghanistan as peaceful Afghanistan would unlock vast opportunities for itself and for the two regions in terms of regional connectivity, market access, job and trade creation and economic growth.

Uzbekistan's role in organizing crucial international forums for promoting inter and intra-regional connectivity has become the voice of all Central Asian states. The Republic's efforts for enhanced regional and trans-regional connectivity have earned world-wide support. The grand international conference for Central and South Asia connectivity in Tashkent in July, 2021 has ushered a new era of reviving the centuries old trade and cultural links between the two regions. Uzbekistan has concrete plans to link Peshawar and Termiz through the development of trans-Afghan railways and highways. It will naturally transform into trade and economic corridor between Central and South Asia as Peshawar can serve as a gateway to South Asia while Termiz can serve as gateway to Central Asia. The fact is that railways, because of its advantages for bulk, containerized and long distance transport, play key role in freight movement. The Trans-Afghan Railway Project has been warmly supported and pursued by Pakistan, Uzbekistan and Afghanistan as the three countries have already requested the international financial organizations to help in financing. Central and South Asia can capitalize on their comparative advantages in terms of human and natural resources by enhancing connectivity via Afghanistan. The post US-Afghanistan has become a regional responsibility in terms of security and connectivity however regional efforts regarding Afghanistan shall be supported by international community. If Afghanistan moves towards instability again it will become a global problem as turned out to be during the 1990s. The neighbors of Afghanistan do not enjoy the luxury of distance in contrast to extra regional states. The drug trafficking, cross border terrorism and refugee influx from instable Afghanistan are immediate concerns of the neighbors of Afghanistan. The development of trade and transport corridor between Central and South Asia shall be devised and frame by the local traders, regional commerce ministries, local companies and banks, farmers and local entrepreneurs instead of military and strategic planners sitting thousands miles away.

Uzbekistan as a member of Shanghai Cooperation Organization (SCO), Economic Cooperation Organization (ECO), and Central Asian Regional Economic Cooperation (CAREC) and as observer in Eurasian Union and important partner in BRI playing critical role in materializing the connectivity plans in the form of trans-regional highways, railways and pipelines. One of the key success factors of CAREC is its focus on development of multi modal transport infrastructure which meets the objectives of regional connectivity and Uzbekistan is important partner in CAREC Corridors. Uzbekistan has been vigorously pursuing policy of developing transport corridors in all directions. In this context Tashkent has been advocating and pursuing policy of transport infrastructure development such as Uzbekistan-Turkmenistan-Iran-Oman corridor and trans-Afghan corridors including the development of Termiz-Mazare Sharif-Kabul-Peshawar rail and road corridor plus the Termiz-Marare Sharif-Herat rail and road corridor. This will help to develop North-South Corridor complementing the Trans-Caspian International Transport Route, Central Eurasian Corridor and other road projects of ECO passing through Uzbekistan contributing to the overall strengthening of the transit potential of the Central Asian region (Kurbanov, 2020). The ECO Road Route 2 starts from Bulgaria and

Greece via Tehran, Ashgabat, Tashkent, Bishkek and Almaty reaches to Chinese border (Khan, 2021).

Uzbekistan actively participating in regional forums including the forum for development of International Transport Corridor (ITC) and focusing on the development of mega projects of railway, highways, airports and free economic zones constructions. In this regard an international conference "Central Asia in the system of International Transport Corridors: strategic prospects and unrealized opportunities" was held in Tashkent in 2018. Uzbekistan has thus prioritized the development of ITC. The Republic is also an important partner in BRI and links Central Eurasian Corridor with the ports of Pakistan and Iran. The development of Uzbekistan-Kyrgyzstan-China railway line under the BRI is mutually beneficial in creating trans-regional connectivity (Islamov, 2020). Construction of new highways, including the development of the Andijan-Osh-Irkeshtam-Kashgar corridor and setting up a railway line along this route will open new prospective transportation corridor under the BRI framework. Tashkent links the Asian Highway 7 (AH 7) from Yekaterinburg in Russia via Afghanistan to the ports on Arabian Sea. AH7 starts from Yekaterinburg in Russia crosses Tashkent, Kabul and reaches Gwadar via Chaman and Kandahar; however Torkham is also linked through highway with Kabul via Jalalabad. AH7 can be a backbone connecting Pakistan, Uzbekistan and Russia and can also take a shape of North-South Corridor to South Asia, Arabian Sea and beyond. The China-Central Asia Pipeline system is yet another example of regional cooperation that starts from Turkmenistan passes through Uzbekistan and Kazakhstan reaches China. All the three CARs feeding gas to this pipeline system for exporting to China which has established an energy corridor intra-regionally.

Uzbekistan-Pakistan Connectivity

With the changes in regional geo-political configuration, Pakistan has reframed its foreign policy with a focus on geo-economics. Geo-economics is a synonym for regional connectivity particularly in the direction of Central Asia via Afghanistan. Pakistan envisages Pakistan-Afghanistan-Central Asia Corridor complementing CPEC. One of the major components of this corridor is the Khyber Pass Economic Corridor with the financial assistance of World Bank worth $402 million which is also part of Corridors 5 and 6 of CAREC (The World Bank, 2019). The Khyber Pass Economic Corridor envisages developing highways, trade and logistic facilities along with Special Economic Zones from Peshawar to Torkham which is linked with Uzbekistan and Tajikistan via Kabul. There is an unprecedented warmth and promotion in Pak-Uzbek overall bilateral relations during the last few years in Particular. Leaders of the two countries talked to each other four times during the year 2021, in online bilateral summit, during July 2021 Connectivity Conference in Tashkent, during the SCO Summit in Dushanbe and in October when the Prime Minister of Pakistan called the President of Uzbekistan and congratulated him on winning the presidential elections. In November 2021, the National Security Advisor of Uzbekistan visited Pakistan and along with the Pakistani counterpart and Pakistan's Minister of Commerce visited Torkham (Pak-Afghan border) to receive the Uzbek trade convoy reached via Kabul under the TIR (International Road Transport).The bilateral trade has increased from $36 million in 2017 to more than $125 million in 2020 (Khan, 2020).

The most important factors that induce Pakistan and Uzbekistan to enhance connectivity are their significant geographical locations in respective regions, the changed regional scenario and the ongoing integration processes in the region. In order to capitalize their geographies and maximally benefit from the integration processes both the countries enhancing

mutual connectivity in this era of revival of Silk Roads. For Pakistan connectivity with Uzbekistan means connectivity with all other CARs. Pakistan is naturally facing towards Central Asia and considers itself part of the process of regionalism reinvigorated by President Shavkat Mirziyoyev in Central Asia.

Improving physical connectivity infrastructure and harmonizing, coordinating policies via Afghanistan is imperative for meaning-full cooperation between Pakistan and Uzbekistan in the short term. Both the countries have signed transit trade agreement in July 2021. Pak-Uzbek connectivity via Afghanistan is a region-grown approach which will be definitely instrumental in stabilizing country by generating economic activity and revenue for the Afghans. The two countries may declare Termiz and Peshawar as sister cities for enhancing connectivity between the two cities in particular and the two countries in general via Afghanistan. Termiz will serve as a gateway to Central Asia while Peshawar as a gateway to South Asia. This status will help increasing cultural, social, educational, trade and economic relations between the two cities which in turn will serve as a friendship bridge between two countries and the regions in large. It is worth mentioning that a trade convoy reached Torkham from Termiz via Kabul on 4th December 2021 which will prove as a milestone in establishing this corridor.

Infrastructure development plays crucial role in connectivity. One of the basic aims of connectivity must be to develop the transport and logistic corridors between Pakistan and Uzbekistan via Afghanistan through Railways and Highways and these will naturally transform into economic corridors due to agglomeration effects. A production network can be developed in the fields of textile, leather, automobiles, food processing and pharmaceuticals by both the countries. The realization of the proposed railway line linking Termiz with Peshawar via Kabul will be a milestone in this regard and will fundamentally change the regional landscape in terms of connectivity. The southern route via Afghanistan and Pakistan will complement the routes in northern, eastern and western directions in Central Asia. For Uzbekistan the route via Afghanistan and Pakistan is the priority (Durso, 2021) and obvious from the current positive developments in bilateral relations. James Durso opined that though for land locked Central Asia connectivity with Pakistan and beyond via Afghanistan is a necessity, this connectivity in southern direction helps the Central Asian region to escape the gravitational pull of Russia and China and therefore USA shall not limit or impede regional integration arrangements via Afghanistan as this will be tantamount to handing over a political win to Russia and China (Durso, 2021).

Institutions are dead bodies and it is human being that brings life to institutions. There is a need to further enhance people to people contacts between Pakistan and Uzbekistan through cultural, educational and media exchanges. Despite having common a common past, the people in both the countries know least about each other. There is a dire need to enhance people to people connectivity on priority basis through faculty/scholar exchanges, cultural exhibitions, book fairs, movies, plays and sports. Direct flights between the two countries will have positive impact on overall relations by developing air corridor. Visa regimes need to be simplified as without getting visas easily neither land nor air corridor will work. There is also a dire need to establish and coordinate banking system for smooth transactions. Establishment of joint ventures and enhancing cooperation in agriculture particularly cotton sector need to be prioritized. A cotton cartel can be developed between Uzbekistan, Pakistan and China under the CPEC industrialization phase. Ali Sher Navoi Research Centre has also been established at the Area Study Centre (Russia, China and Central Asia) University of Peshawar with the financial

assistance of the Embassy of Uzbekistan in Islamabad. It will benefit the scholars in Peshawar to learn and conduct research on Uzbek language and literature.

Conclusions

One can observe that after the US/NATO withdrawal from Central Asia and the diverted Russian attention and competition from the region, Central Asia most probably will move from a shatter belt (a region torn by internal strife and external intervention) status to strengthened regionalism. The developments drive Central Asian region to revive the historical links and open up in southern direction though accompanied with challenges. In this context Pakistan and Uzbekistan have to play decisive roles. Both the countries have realized that Afghanistan besides posing challenges also present opportunities. Uzbekistan has achieved outstanding economic growth and development during the last three decades and assuming a leading role in the region of Central Asia for enhanced connectivity. In the changed regional circumstances Pakistan and Uzbekistan are making efforts to enhance connectivity via Afghanistan and ultimately help the war torn country in stabilization. Uzbekistan played an important role in the conflict of Afghanistan even during the 1990s by initiating the 6+1 format for talks on resolving the Afghan issue. Similarly Uzbekistan has been facilitating and hosting talks on Afghanistan for bringing sustainable peace to the country in post US withdrawal period and has been advocating Afghanistan's inclusion in the regional economic processes. Uzbekistan has been driving the international community to engage with the Taliban. Tashkent convened an important conference on Afghanistan on July 26, 2022 in which delegations from nearly 30 countries interacted with the Taliban (Imamova, 2022).The purpose seems to facilitate and help Afghanistan in achieving sustainable peace for enhanced regional connectivity as a corner stone of the region.

Uzbekistan after consolidating its nation and statehood is looking beyond its national borders to play active role in regional connectivity particularly in the southern direction via Afghanistan which historically remained a trade conduit between Central and South Asia. The Eurasian landmass is increasingly integrating due to the major powers' connectivity plans and cooperation particularly between China and Russia which was absent during the last century. There is also a growing realization in the Eurasian heartland for regional cooperation to maximally benefit from the integration plans of major powers that have the capital and technology to develop cross border connectivity infrastructure. Many factors induce Uzbekistan to focus on regional and trans-regional connectivity such as the integration plans of major powers for Eurasian connectivity, the geographical location of Uzbekistan in the heartland of Eurasia, the prospects of Central and South Asia connectivity via Afghanistan and to capitalize on its tremendous growth and development by having access and providing access to markets in all directions. The bilateral relations between Pakistan and Uzbekistan have grown tremendously in all spheres of life. Both the countries making coordinated efforts necessitated by changed regional circumstances to capitalize on their geographical locations through enhanced connectivity. The Pak-Uzbek transit agreement will include Uzbekistan in the WeBoC (Web based one custom) custom system of Pakistan for enhanced trade via Afghanistan. The two countries also facilitate the development of links between the research and academic institutions to undertake joint research projects on regional and bilateral issues of security, connectivity and development. The post Pandemic era will be characterized by regionalism as there are already trends of de-globalization.

References

Cooley, A. (2012). *Great Games Local Rules: The New Great Power Contest in Central Asia*. Oxford: Oxford University Press, p. 25

Diesen, G. (2018). *Russia's Geo-economics Strategy for a Greater Eurasia.* New York: Routledge, p.6

Durso, J. (2021, October 20). *Central Asia-South Asia connectivity may hinge on Pakistan-US relations*. The Hill. https://thehill.com/opinion/international/577672-central-asia-south-asia-connectivity-may-hinge-on-pakistan-us-relations

GCRF. (2020, February). *Uzbekistan in the context of Regional Security and Global Change*. University of Kent. https://www.kent.ac.uk/politics/rs-gcrf-compass/UWED-Conference-Programme-and-brochure-final-res.pdf

Imamova, N. (2022, July 27). *"Nearly 30 Nations Engage with the Taliban at Tashkent Conference*." VoA. Available at: https://www.voanews.com/a/almost-30-nations-engage-with-taliban-at-tashkent-conference-/6676107.html accessed 1/08/2022

Imamova, N. (2021, July 13). *Uzbekistan Promotes Connectivity to Enhance its Regional Leadership.* VOA. https://www.voanews.com/a/south-central-asia_uzbekistan-promotes-connectivity-enhance-its-regional-leadership/6208215.html accessed on 01/08/2022

Islamov, B.; Islamov, D. and Sitora Primova. (2020, February). "Uzbekistan's support for the synergy of the TRACECA and Belt and Road Initiative Projects" Uzbekistan in the context of Regional Security and Global Change, 7-8 November 2019. *UWED GCRF COMPASS Conference Proceedings*. https://www.kent.ac.uk/politics/rs-gcrf-compass/UWED-Conference-proceedings-2019-final-Feb-formatted.pdf

Khan, S. A. (2021). "*Economic Cooperation Organization's (ECO's) Trans-Regional Integration based on Open Regionalism*". Ankara, Turkey: Economic Cooperation Organization Educational Institute ("ECOEI")

Khan, S.A. (2008, Winter). "Economic Transition in Central Asia," *Central Asia*, no. 63. Peshawar: Area Study Centre, University of Peshawar, p. 41. http://asc-centralasia.edu.pk/old_site/Issue_63/03-ECONOMIC_TRANSITION.html.

Khan, S.A. (2021). "Sino-Russian Convergence on Eurasian Integration: Understanding the Long-Term Engagement" *South Asian Studies Journal*, 36(1). Lahore: Area Study Centre for South Asia, Punjab University

Khan, T. (2020, February 25). "Uzbekistan to increase trade with Pakistan to $300m, says envoy", *Daily Times*. https://dailytimes.com.pk/564411/uzbekistan-to-increase-trade-with-pakistan-to-300m-says-envoy/

Khanna, P. (2016). "*Connectography: Mapping Future of Global Civilization*". New York: Random House. Available at: https://catalog.washoecountylibrary.us/GroupedWork/6c9e54c0-9e24-8662-a722-21b8cac1ea00/Home

Krugman, P. R. (1991). *Geography and Trade.* Cambridge, MA: MIT Press

Kurbanov, D. (2020, February). "Uzbekistan's new regional policy: Implications for international cooperation in wider Eurasia" Uzbekistan in the context of Regional Security and Global Change, 7-8 November 2019, *UWED GCRF COMPASS Conference Proceedings.*

Macrotrends. (2021). *Uzbekistan GDP Growth Rate 1988-2021*, retrieved from macro trends https://www.macrotrends.net/countries/UZB/uzbekistan/gdp-growth-rate accessed on 08/11/2021 also confirmed by the link https://countryeconomy.com/gdp/uzbekistan

Nematov**, A.** and Umarova**,** L. (2021, May 07). "*Consolidated and predictable Central Asia becomes more attractive in economic and investment terms*. News Central Asia**.** http://www.newscentralasia.net/2021/05/07/consolidated-and-predictable-central-asia-becomes-more-attractive-in-economic-and-investment-terms/

Popov, V. (2013, July 30). *Economic Miracle of Post-Soviet Space: Why Uzbekistan Managed to Achieve What No Other Post-Soviet State Achieved.* http://mpra.ub.uni-muenchen.de/48723/

Saito, R. (2022, January 11). "*Central Asia after the Fall of Kabul and Strategies for Japan's Engagement"*. The Sasakawa Peace Foundation. https://www.spf.org/iina/en/ articles/saito01.html , accessed on 23/01/2022

The World Bank. (2019, October 1), *Khyber Pass Economic Corridor.* https://www.worldbank.org/en/news/factsheet/2019/10/01/khyber-pass-economic-corridor-kpec

Tolipov, F. (2015, November 13). "Pluses and Minuses of C5+1 Format". *The Central Asia-Caucasus Analyst.* https://www.cacianalyst.org/publications/analytical-articles/item/13300-pluses-and-minuses-of-the-c5%201-format.html

Were Fleet Planning Problems Responsible for the Collapse of Thai Air Carriers? A Preliminary Case Study of One-Two-Go Airlines

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The unprecedented growth of the Thai air transport sector that commenced in the early 2000s attracted at least 30 new air carriers into the country's airline market. However, a substantial number of them went bankrupt even before the COVID-19 pandemic disrupted the world aviation industry. This study hypothesised that flawed fleet planning was behind the collapse of many carriers in Thailand. One-Two-Go Airlines, the "low-fare" carrier owned by Orient Thai Airlines, was used as a case study. The hypothesis was initially tested by evaluating whether the One-Two-Go fleet of aircraft was in line with the low-cost airline business model and aircraft selection principles commonly adopted by many low-cost carriers worldwide. The preliminary findings indicated that the way the airline planned, acquired, and managed its aircraft did not appear to be the key factor behind its collapse. Rather, a negative brand image derived from safety concerns after the crash of Flight 269 was a key factor causing the airline to cease operations.

Keywords: aircraft selection, fleet planning, low-cost carriers, One- Two-Go Airlines, Orient Thai Airlines, public transport

In Asia, air travel has grown at a rapid pace, with dozens of new airlines having been launched in the past two decades. Thailand, in particular, has seen a significant number of new players enter the market since 2003, following the liberalisation of its aviation industry (Kovudhikulrungsri & Pompongsuk, 2020), instigated and accelerated by open-skies agreements under the umbrella of the Association of Southeast Asian Nations (ASEAN) to reduce market access barriers for ASEAN carriers (see Rahman, 2018). In the past two decades or so, Thai air traffic has increased exponentially in terms of aircraft movements, passenger volume, and airfreight. Despite the foregoing development, no less than 30 Thai-registered airline carriers that launched after 2000 collapsed between the years 2000 and 2019 (Darke, 2022; Darke & Vannukul, 2015), even before the COVID-19 pandemic disrupted the country's air transport sector in early 2020.

Given the significant number of failed airlines witnessed within the two decades of the international tourism boom and regardless of the liberalisation of national and regional aviation policies (Lee, 2019), it is worthwhile examining the reasons for these failures. However, comprehensive and comparative analysis of these airlines is difficult because the information needed for such analysis, including balance sheets and registration data, is barely accessible.

Fleet planning—from aircraft selection to aircraft acquisition—has been deemed a decisive factor in the success and failure of airline carriers. Poor fleet planning decisions could

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push airline firms into the red and, in the worst-case scenario, compel firms to cease trading. By taking this into account, imprudent fleet planning might explain why a large number of Thai carriers ceased operations even before the COVID-19 pandemic. The aim of this study is to determine whether fundamental flaws in fleet planning played a crucial role in the substantial number of Thai carriers suffering severe financial hardship and eventual bankruptcy. One-Two-Go Airlines (hereafter, "One-Two-Go"), a Thai budget carrier active from 2003 to 2010, is taken as a case study in this regard. Specifically, the present study evaluates One-Two-Go's air fleet by comparing it with other low-cost business models and aircraft selection principles. The objective here is modest: to determine whether One-Two-Go's fleet choice was tailor-made for its business in Thailand's air transport market.

Literature Review

Fleet planning is the process by which an airline acquires and manages appropriate aircraft capacity to serve anticipated markets over a variety of defined periods with a view to maximising corporate profitability. Moreover, it is a continuous plan for at least 15 years into the future (Guzhva et al., 2019). This is unlike route planning, which deals with how and when aeroplanes will fly specific routes. Fleet planning principally focuses on how many aircraft are needed and what types they should be. For this reason, an airline's fleet usually reflects its structure and business model (Clark, 2017; Koch, 2010). Before proceeding further, it should be noted that the present study focuses narrowly on the low-cost carrier business model. Accordingly, this model is outlined in the following narrative. It is then followed by a summary of aircraft selection principles.

Low-Cost Carrier Business Model

After reviewing the existing literature, the low-cost carrier business model can be explained on the basis of four principles: (a) cost leadership, (b) differentiation, (c) low-cost infrastructure, and (d) control of distribution channels (Alamdari & Fagan, 2005; Budd & Ison, 2014; Cook & Billig, 2017; Gross & Lück, 2013; Koch, 2010; Voigt et al., 2017). The first two principles—cost leadership and differentiation—are more relevant to the present study than the last two.

The first principle—cost leadership—refers to an airline's efforts to offer lower prices than its competitors by reducing its costs in various ways. They operate more efficiently than traditional airline operators by lowering staff costs (achieved through outsourcing many functions) (Endrizalova et al., 2018). Low-cost airlines tend to operate only one type of aircraft and, more often than not, lease rather than purchase them (Alamdari & Fagan, 2005). For instance, Southwest Airlines operates the Boeing B737 series exclusively (Zou & Dresner, 2015). Typically, aircraft used by low-cost carriers have a single-class, high-density configuration (Brüggen & Klose, 2010). Furthermore, they usually eliminate in-flight amenities and complimentary meals. Passengers have to pay extra charges for things such as overweight carry-on baggage and checked luggage (Koch, 2010).

By contrast, the second principle—differentiation—refers to how an airline tries to differentiate itself from other airlines by offering services that are unique among other airlines (Daft & Albers, 2015). Some low-cost carriers may offer free Wi-Fi access on board their flights, but other airlines charge for it.

The third principle is low-cost infrastructure. This refers to how an airline keeps its operational costs down by operating at secondary airports with lower landing fees and taxes (De

Neufville, 2008), using fewer employees and providing minimal customer service at the airport (Humphreys et al., 2006). Many low-cost carriers do not have their own terminals and instead use smaller airports with limited facilities (Koch, 2010).

The fourth principle is control of distribution channels. Low-cost carriers use a direct sales model, meaning they tend not to rely on travel agents. Instead, they sell directly to customers via the Internet or by telephone (Koch, 2010). This is best exemplified by Southwest Airlines, a US low-cost carrier that does not have reservation centres; instead, it uses a call centre for booking tickets and customer service calls (Smith, 2004; Voigt et al., 2017). This strategy means that low-cost carriers can avoid paying commissions to travel agents for each ticket sold. In addition, because these companies do not pay commissions, they can offer lower prices than their competitors who use travel agents (Cook & Billig, 2017; Koch, 2010).

By selling cheaper airfares, low-cost carriers have successfully gained market shares in their respective air travel markets. Yet, a substantial portion of passengers is concerned about the safety of low-cost airlines. In Southeast Asia, where air transport markets expanded rapidly, the shared perception was that aircraft operated by low-cost carriers tended to be outdated and second-hand (Yeung et al., 2012). Such negative perceptions and safety concerns appeared to be bold due to a series of air crash accidents that happened in the 2000s and 2010s. Those incidents included the crash of One-Two-Go Airlines Flight 269 at Phuket's airport in September 2007 (Lee, 2009).

Principles of Aircraft Selection

In this study, aircraft selection is approached from an airline's perspective, which differs from the standard criteria generally used by aircraft lessors. More precisely, the present study relies preponderantly, albeit not exclusively, on Guzhva et al., (2019) principles of aircraft selection. According to Guzhva et al., (2019), the following determinants are crucial aspects of the aircraft selection process: (a) mission capability, (b) fleet composition, (c) availability, and (d) economic and financial considerations.

Mission Capability

Planned routes are a key part of airline operations. Airline carriers must ensure that their planes can carry the necessary amount of weight and reach the required destination in time with enough fuel. Pre-setting the minimum payload, range, and speed requirements for flight paths precisely dictates what kind of aircraft an airline should be looking for. To give an example, airline firms must evaluate whether jet or turboprop aircraft would be well-matched with services to intended destinations, whereas airport capacity is usually varied.

Fleet Composition

One of the most important decisions an airline carrier has to make is how to structure its fleet. It can choose from two options: either a standardised or diversified fleet. The fleet of an airline tends to reflect its strategy and business model.

A standardised fleet comprises aircraft that are all of the same type. This can be beneficial for low-cost carriers, as fleet commonality is likely to increase overall performance (Brüggen & Klose, 2010; Zou & Dresner, 2015). The advantages of fleet commonality include, inter alia, saving turnaround times at the gate, boosting flight frequencies, and maximising the utilisation of aircraft (Huettinger & Adomavičius, 2011). AirAsia, for example, used to fly only Boeing B737-300s (see Ricart & Wang, 2005). However, this means that any problem rooted in the model design or technical issue with maintenance or repairs would result in the entire fleet

being substantially affected or even grounded. Such a scenario is best exemplified by the grounding of the Boeing B737 MAX family, ordered by civil aviation authorities around the world.

A diversified fleet provides airlines with greater flexibility in managing their operations, as it enables them to use different types of aircraft depending on routes and flight frequency. Airlines might have a mix of Airbus A330 and Boeing B737 families depending on which routes they operate; this would enable them to fly direct flights between certain destinations while still maintaining frequent flights elsewhere by using smaller planes. A diversified fleet is usually adopted by full-service carriers, especially flag airlines (Koch, 2010). Regardless, the general trend is that the larger the carrier, the higher the probability that it will have a diversified fleet (Guzhva et al., 2019).

Availability
Although airlines may know which type of aircraft they want to purchase and have the financial capacity to do so, they might not be able to obtain their preference because a new aircraft takes around five years or more to deliver (Clark, 2017). As such, new aircraft must be ordered in advance of forecasted delivery schedules. Airlines may turn to other choices, such as purchasing used aircraft or leasing from lessors.

Given these factors, airline carriers are often faced with a dilemma: they must either wait five years for a new aircraft or purchase an older model that is immediately available but has less desirable characteristics (such as a lower seating capacity). The airline industry is particularly susceptible to this dilemma because the amount of time it takes for an airline firm to bring an aircraft into service is often critical for the success of the business. For example, if there is a sudden increase in demand for flights between two destinations during one month, then airlines must be able to respond quickly by increasing their capacity on those routes by adding extra flights—or even buying more planes—to reap the profit from such a spike in demand.

In the used aircraft market, smaller and less well-funded airlines are more exposed to this availability problem. This is more evident when they try to find multiple aircraft with similar configurations (Guzhva et al., 2019). Reconfiguration is extremely costly; therefore, only legacy carriers can afford to reconfigure older aircraft, while smaller airlines cannot (Clark, 2017; Niţă & Scholz, 2011). Additionally, spare parts for unpopular, ageing aircraft types are hard to acquire because fewer companies order them (Kilpi et al., 2009). This makes it more difficult for smaller carriers with older fleets of unpopular, used aircraft to maintain their revenue generators at optimum operationalizability economically.

Economic and Financial Considerations
When purchasing aircraft, large, full-service airlines have more leverage over aircraft manufacturers than smaller air operators. As a result, relatively small carriers tend to pay more for brand-new planes than their larger counterparts (Guzhva et al., 2019). More often than not, smaller airline firms with limited resources have to consider other ways of acquiring aircraft, such as purchasing used planes or leasing a fleet from lessors.

New aircraft models are released at relatively high prices, thereby flooding the second-hand market with more affordable but ageing planes. Smaller, undercapitalised airlines avail themselves of this to purchase those second-hand aircraft. Notwithstanding, there is a trade-off:

older aircraft types have higher operating costs than newer ones due to disparities in maintenance costs and fuel consumption efficiency (Dixon, 2006; MacLean et al., 2018).

Second-hand aircraft can be leased to smaller air operators who may not have sufficient capital to purchase them outright. Low-cost carriers operating homogeneous aircraft fleets are more likely to lease their entire fleets (Brüggen & Klose, 2010; Magdalina & Bouzaima, 2021). The cost of leasing is determined by supply and demand. Aircraft with high demand tend to have higher leasing rates, while aircraft with low demand—particularly older models—tend to have lower leasing rates (Guzhva et al., 2019).

With environmental standards becoming stricter in recent decades, airlines operating ageing aircraft have to deal with a variety of measures that are intended to reduce carbon dioxide emissions and noise pollution (Malathi, 2012). These measures include surcharges according to the amount of pollution emitted by the planes during takeoff and landing. In Asia, many of these measures have been implemented at international airports for about two decades. This is another trade-off that airlines must consider while purchasing or leasing older aircraft (Lu, 2009).

Hypothesis
Fleet planning—more precisely, the selection and acquisition of aircraft—is a crucial step in airline management and operations (Clark, 2017; Guzhva et al., 2019), especially considering aircraft are almost the sole revenue generator for airline firms. Imprudent decisions regarding aircraft selection and acquisition could have detrimental repercussions on an airline's economic viability. Accordingly, this study proposes the following hypothesis:

> H1: Fleet planning problems, particularly flawed aircraft selection (such as aircraft mismatched with the business model), were most likely the major factor causing One-Two-Go Airlines to cease operation.

Method
This study employed the case study method, which is widely used in business and management research (Patton & Appelbaum, 2003). Specifically, the author followed the five-step procedure recommended by Patton and Appelbaum (2003) for case study research: (a) identifying a suitable research area; (b) selecting a case relevant to the research area; (c) developing an initial analytical framework through a review of existing literature; (d) collecting and filtering data; and (e) analysing data, discussing results, and drawing conclusions.

This study relied mainly on secondary sources. These included, inter alia, news media outlets, scholarly work, and aviation-related publications. The first comprehensive seminal book on civil aviation in Thailand, written by Darke and Vannukul (2015), was consulted as the key reference.

Results and Discussion

Facts of the Case

The facts concerning One-Two-Go Airlines (IATA: OG; ICAO: OTG) are bewildering and unclear. On the one hand, this is due to the inaccessibility of the government's aircraft registration records; on the other hand, there is a lack of transparency in the way the airline is managed. In light of these issues, the relevant facts of the case outlined in the following narrative relied almost exclusively on Darke and Vannukul's (2015) seminal monograph.

One-Two-Go was a subsidiary budget carrier of Orient Thai Airlines (hereinafter Orient Thai; IATA: OX; ICAO: OEA) that entered the Thai low-cost airline market in late 2003, although not as a separate airline. Rather, during its initial years, One-Two-Go operated under Orient Thai's Air Operator Certification (AOC)—in other words, One-Two-Go was simply a "brand," not an actual "air operator." In December 2003, operating as a low-fare wing of the Orient Thai, One-Two-Go made its inaugural flight from Bangkok to Chiang Mai, the major province in northern Thailand, with a Boeing B757-200. One-Two-Go then expanded its services from the capital city to Chiang Rai, Phuket, Hat Yai, and Udon Thani. In August 2005, it added the Bangkok–Surat Thani route to the service. During these initial years, One-Two-Go mainly used three B757s for its services. Besides the three B757s, it occasionally made use of the parent airline's Boeing B747-100, 200 and 300s for domestic routes (Darke & Vannukul, 2015).

It was not until 2006 that One-Two-Go became a separate carrier with its own AOC and started using the "OG" code for all flights (Darke & Vannukul, 2015). While the firm was entirely owned by its parent, Orient Thai Airlines (Saha & Theingi, 2009), the airline also built a fleet of its own: four McDonnell Douglas MD-82s, formerly owned by Continental Airlines in the United States, were exported to Thailand to form its new fleet. Nevertheless, they were registered in the name of the parent company, Orient Thai Airlines, which wet-leased them out to its subsidiary, One-Two-Go. Together with the four MD-82s, one B757-200 had been leased for operation by One-Two-Go until early 2007 (Darke, 2022). In October of the same year, the low-fare carrier added Krabi as another route from Bangkok (Darke & Vannukul, 2015).

Even though One-Two-Go's main competitors were low-cost carriers (i.e., Nok Air and Thai AirAsia) and its business was running in the low-cost air transport market, the airline's owner repeatedly claimed that One-Two-Go was *not* a low-cost carrier but a "low-fare" airline (Manager Weekly, 2008). In-flight meals, snacks, and beverages were being served on all One-Two-Go flights. Furthermore, unlike its competitors, One-Two-Go's business strategy was to sell all seats for each route at a flat rate (see Saha & Theingi, 2009; Thanasupsin et al., 2010). This, in turn, differentiated the airline from its low-cost peers and attracted a number of passengers (Davies, 2009).

From March to July 2007, One-Two-Go added more aircraft to its MD-80 series fleet, namely: (a) two MD-82s, (b) one McDonnell Douglas MD-83, and (c) one McDonnell Douglas MD-87 (Darke, 2022). Unfortunately, in September of that year, one of its MD-82s (Flight 269) crashed upon landing in a heavy storm at Phuket International Airport. Of the 123 passengers and seven crew members onboard, 90 were killed (Watson, 2007). In December, another MD-87 was acquired for operation by One-Two-Go (Darke & Vannukul, 2015). All the MD-80s, including the one that crashed, had been wet-leased from One-Two-Go's parent company.

The crash of Flight 269 severely damaged the One-Two-Go brand (Darke & Vannukul, 2015) and aggravated the bad reputation of its parent company, Orient Thai Airlines, which already had a poor safety record (Fuller, 2007). The final report of the Aircraft Accident Investigation Committee (AAIC), released in 2009, indicated that Orient Thai, which operated on behalf of its subsidiary low-fare carriers, violated the flight time limitation rules by assigning the pilots of Flight 269 heavy workloads exceeding their flight time and flight duty limits (Aircraft Accident Investigation Committee [AAIC], 2009). The report also pointed out that the training and proficiency checks conducted by Orient Thai did not comply with standard regulations (AAIC, 2009).

In the aftermath of the accident, Thailand's Department of Civil Aviation temporarily suspended One-Two-Go's and Orient Thai's AOCs on July 22, 2008. Nevertheless, these were restored in December. One-Two-Go resumed services using a fleet of five MD-82s (Darke & Vannukul, 2015). Still, the low-fare carrier continued to face repercussions for the Flight 269 accident. In 2009, the European Commission included One-Two-Go Airlines in its airline safety blacklist, thereby banning all One-Two-Go flights from entering European skies (Scott, 2009). In September 2010, One-Two-Go Airlines shut down as both a brand and an air operator. Its AOC was later revoked. All services were transferred to Orient Thai Airlines.

Analysing One-Two-Go Airlines' Fleet Planning

The preceding section demonstrates that analysis of One-Two-Go's fleet planning should be temporally divided into two periods: (a) between 2003 and 2006, when One-Two-Go operated as a brand; and (b) between 2006 and 2010, when One-Two-Go operated as an air operator. The focus of this study is more on the latter, as One-Two-Go Airlines did not officially exist during the former period. Clark describes how fleet planning is "…the process by which an airline acquires and manages appropriate aircraft capacity in order to serve anticipated markets over a variety of defined periods of time with a view to maximising corporate wealth" (2017, p. 2). The following presents an analysis of One-Two-Go's fleet for both periods.

One-Two-Go Airlines as a Brand (2003–2006)

During the period 2003–2006, One-Two-Go virtually operated as a subsidiary brand of Orient Thai Airlines, a Thai-registered air operator whose business model might be best classified as a hybrid carrier. By offering charter flights and wet-leasing services (Darke & Vannukul, 2015), it operated as a wing of the Orient Thai company to compete in Thailand's increasing low-cost air travel market.

Table 1 illustrates aircraft types reported as operated by Orient Thai's One-Two-Go brand and their specifications. Its main vehicles were wet-leased B757-200s with a single-class layout and more than 210 seats. The direct operating cost (DOC) value of the B757-200 was 2,509, which was higher than that of the B737-300s and B737-400s, with DOC values of 1,827 and 1,862, respectively (Rediess, n.d.). However, One-Two-Go's B757-200s could carry more passengers than the B737s operated by Nok Air and Thai AirAsia, where the maximum number of seats was 148. Therefore, Orient Thai's operation with the One-Two-Go brand using wet-leased B757s was deemed reasonable.

Regardless, the use of big jets like the B747s could not accommodate the highly competitive low-cost air travel business environment. Even with a full number of passengers, operating domestic routes with B747s was not economically viable. Therefore, Orient Thai's decision to do so from time to time did not seem to be rational in terms of cost-benefit.

Table 1
One-Two-Go's fleet, 2003–2006

	Aircraft type	
	B757-200	B747-100/200/300
Number of aircraft	3[a]	5[b]
Aircraft family	B757 Series	B747 Series
Year of manufacturer	HS-OTA: 1989	HS-UTJ: 1979
	XU-123: 1989	HS-UTK: 1984
	HS-OTB: 1984	HS-UTL: 1985
	XU-234: 1986	HS-UTM: 1986
		HS-UTQ: 1986
Total seats	HS-OTA: 216	N/A
	XU-123: 216	
	HS-OTB: N/A	
	XU-234: 219	
Range (km)	5,000	N/A
DOC value	2,509	

Note. Compiled from the Civil Aviation Authority of Thailand ([CAAT], 2019), Darke (2022), Darke & Vannukul (2015), Rediess (n.d.), and the United States International Trade Commission ([USITC], 1998): a = HS-OTB acquired in mid-2004, while XU-123 was replaced by XU-234; b = Orient Thai's B747 aircraft painted with One-Two-Go titles.

One-Two-Go Airlines as an Air Operator (2006–2010)

In late 2006, One-Two-Go Airlines officially became a separate airline firm owned by Orient Thai Airlines. The low-fare carrier operated a single-family fleet almost exclusively using MD-80 series aircraft, wet-leased from the parent company (AAIC, 2009), thereby enabling the firm to enhance its operating performance. As the fleet was wet-leased, One-Two-Go's entire flight operation was outsourced to and handled by Orient Thai. Considering that only one B757-200 was returned to the lessor in early 2007, One-Two-Go's fleet planning fit the low-cost airline business model, wherein fleet standardisation is one of the key features.

In terms of direct operating costs, the DOC value of One-Two-Go's MD-80 series aircraft was nearly the same as those of the aircraft types mainly used by other low-cost carriers in Thailand (see Table 3). As for fleet capability, the MD-80 series aircrafts were overall suitable for One-Two-Go's services, which were mostly short domestic flights. The aircraft even had built-in ventral air stairs (Woodley, 2018). This enabled their operator to depend less on ground-handling facilities, especially at smaller airports.

In spite of that, the MD-80s operated by One-Two-Go Airlines were relatively older. In turn, the ageing fleet tended to require more maintenance than its competitors. This tendency seemed to be supported by the fact that, in the years 2008 and 2009 alone, Orient Thai Airlines (the wet lessor of One-Two-Go's aircraft) had to buy no less than six used MD-80s from Japan for spare parts (Darke & Vannukul, 2015). This created a heavier financial burden for both firms, as they were charged more for airport slot fees. Albeit operating older aircraft, fleet planning alone was incapable of closing down One-Two-Go Airlines. The failure lies with something else rather than the company's fleet.

Table 2
One-Two-Go's fleet, 2006–2010

	Aircraft type			
	B757-200	MD-82	MD-83	MD-87
Number of aircraft	1	6[a]	1	2
Aircraft family	B757 Series	MD-80 Series	MD-80 Series	MD-80 Series
Year of manufacturer	HS-BTA: 1986	HS-OMA: 1986 HS-OMB: 1986 HS-OMC: 1986 HS-OMD: 1986 HS-OMG: 1983 HS-OME: 1983	HS-OMH: 1990	HS-OMI: 1988 HS-OMJ: 1989
Total seats	219	HS-OMA: 141 HS-OMB: 141 HS-OMC: 141 HS-OMD: 141 HS-OMG: N/A HS-OME: N/A	HS-OMH: 157	HS-OMI: 134 HS-OMJ: 134
Range (km)	5,000	3,796	4,633	4,392
DOC value	2,509	1,782[b]	1,782[b]	1,782[b]

Note. Compiled from CAAT (2019), Darke (2022), Darke & Vannukul (2015), Rediess (n.d.), and USITC (1998); a = HS-OMG destroyed in the accident at Phuket; b = no DOC values for certain versions of the MD-80 aircraft available (Rediess, n.d.).

Table 3
DOC values of aircraft operated by Thai budget carriers, 2006–2010

	One-Two-GO Airlines	Nok Air	Thai AirAsia	
Aircraft type	MD-80 Series	B737-400	B737-300	A320-200
DOC value	1,782[a]	1,862	1,827	1,788

Note. Compiled from CAAT (2019), Darke & Vannukul (2015), and Rediess (n.d.); a = no DOC values for certain versions of the MD-80 aircraft available (Rediess, n.d.).

Conclusion

This study began with the hypothesis that flawed fleet planning was a crucial factor causing many airline carriers to go out of business. To initially test this hypothesis, One-Two-Go Airlines was used as a preliminary case study. It was found that even though the firm's fleet planning was not flawless, it did follow key features of the low-cost business model—most notably, operating a single-family fleet of aircraft. Thus, in the One-Two-Go case, aircraft selection and acquisition were not decisive factors that caused the low-fare carrier to collapse. In a nutshell, the case investigated here did not support the hypothesis.

The bad reputation and safety concerns among local and foreign passengers after the accident of One-Two-Go Flight 269 might play an important role in the firm's decision to close down the One-Two-Go brand. In addition, macro-environmental factors surrounding the firm should probably be taken into consideration. Regardless, those are beyond the narrow scope of this study. Consequently, the results reported here should be deemed tentative. Further analysis of the topic is needed to draw generalised conclusions. Or perhaps, a case-by-case analysis would yield a better understanding than seeking generalisations about market entry and exit among Thai carriers.

References

Aircraft Accident Investigation Committee. (2009). *Aircraft accident final report: One Two Go Airlines Company Limited McDonnell Douglas DC-9-82 (MD-82) HS-OMG*. Ministry of Transport.

Alamdari, F., & Fagan, S. (2005). Impact of the adherence to the original low-cost model on the profitability of low-cost airlines. *Transport Reviews*, *25*(3), 377-392. https://doi.org/10.1080/01441640500038748

Brüggen, A., & Klose, L. (2010). How fleet commonality influences low-cost airline operating performance: Empirical evidence. *Journal of Air Transport Management*, *16*(6), 299-303. https://doi.org/10.1016/j.jairtraman.2010.02.006

Budd, L., & Ison, S. (Eds.). (2014). *Low cost carriers: Emergence, expansion and evolution*. Routledge.

Civil Aviation Authority of Thailand. (2019). *Aircraft registration data* (March 18) [Microsoft-Excel formatted data]. Civil Aviation Authority of Thailand. https://www.caat.or.th/wp-content/uploads/2019/03/Aircraft-List_18-Mar-2019-Un-controlled-TH.xlsx

Clark, P. (2017). *Buying the big jets: Fleet planning for airlines* (3rd ed.). Routledge.

Cook, G. N., & Billig, B. (2017). *Airline operations and management: A management textbook*. Routledge.

Daft, J., & Albers, S. (2015). An empirical analysis of airline business model convergence. *Journal of Air Transport Management*, *46*, 3-11. https://doi.org/10.1016/j.jairtraman.2015.03.008

Darke, S. M. (2022, May 5). *Defunct Thai Airlines*. https://www.thai-aviation.net/_files/ugd/3b4903_78ed8458f07c4b11b8d2d926537a75a4.pdf

Darke, S. M., & Vannukul, V. (2015). *Royal Orchid: The history of civil aviation in Thailand*. Air Britain (Historians) Limited.

Davies, P. (2009, August 11). Skywars: Now showing in Thailand. *Travel Weekly Asia*. https://www.travelweekly-asia.com/Travel-News/SkyWars-Now-showing-in-Thailand1

De Neufville, R. (2008). Low-cost airports for low-cost airlines: Flexible design to manage the risks. *Transportation Planning and Technology*, *31*(1), 35-68. https://doi.org/10.1080/03081060701835688

Dixon, M. C. (2006). *The maintenance costs of aging aircraft: Insights from commercial aviation*. (MG-486-AF). Santa Monica: RAND Corporation Retrieved from https://www.rand.org/pubs/monographs/MG486.html.

Endrizalova, E., Novak, M., Nemec, V., Hyrslova, J., & Mrazek, P. (2018, October 11-12). Operating lease as a specific form of airlines outsourcing. The 18th International Scientific Conference Business Logistics in Modern Management Osijek.

Fuller, T. (2007, September 16). Dozens are killed as jet crashes in Thailand. *The New York Times*. https://www.nytimes.com/2007/09/16/world/asia/16cnd-crash.html

Gross, S., & Lück, M. (Eds.). (2013). *The low cost carrier worldwide*. Routledge.

Guzhva, V. S., Raghavan, S., & D'Agostino, D. J. (2019). *Aircraft leasing and financing: Tools for success in aircraft acquisition and management*. Elsevier. https://doi.org/10.1016/C2016-0-03505-2

Huettinger, M., & Adomavičius, B. (2011). A framework for assessing the low-fare model in the airline industry. *Ekonomika*, *90*(1), 115-130. https://doi.org/10.15388/Ekon.2011.0.952

Humphreys, I., Ison, S., & Francis, G. (2006). A review of the airport-low cost airline relationship. *Review of Network Economics*, *5*(4). https://doi.org/doi:10.2202/1446-9022.1105

Kilpi, J., Töyli, J., & Vepsäläinen, A. (2009). Cooperative strategies for the availability service of repairable aircraft components. *International Journal of Production Economics*, *117*(2), 360-370. https://doi.org/10.1016/j.ijpe.2008.12.001

Koch, B. (2010). Aviation strategy and business models. In A. Wald, C. Fay, & R. Gleich (Eds.), *Introduction to aviation management*. LIT Verlag.

Kovudhikulrungsri, L., & Pompongsuk, P. (2020). Ownership and control of Thai airlines: Liberal Spirit in the Cloak of Nationalism. In J. W. Lee (Ed.), *Aviation law and policy in Asia: Smart regulation in liberalized markets* (pp. 235-252). Brill.

Lee, J. W. (2019). ASEAN air transport integration and liberalization: A slow but practical model. In B. Mercurio & P. L. Hsieh (Eds.), *ASEAN law in the new regional economic order: Global trends and shifting paradigms* (pp. 186-206). Cambridge University Press.

Lee, K.-S. (2009). A study on the aviation safety policy and enhancement of aviation safety for low cost carriers in Korea. *The Korean Journal of Air & Space Law and Policy, 24*(2), 69-104. https://koreascience.kr/article/JAKO200915233598987.page

Lu, C. (2009). The implications of environmental costs on air passenger demand for different airline business models. *Journal of Air Transport Management*, *15*(4), 158-165. https://doi.org/10.1016/j.jairtraman.2008.09.019

MacLean, L., Richman, A., & Hudak, M. (2018). Failure rates for aging aircraft. *Safety*, *4*(1).

Magdalina, A., & Bouzaima, M. (2021). An empirical investigation of European airline business models: Classification and hybridisation. *Journal of Air Transport Management*, *93*.

Malathi, K. (2012). Aviation pollution–impact on environment. In R. Singh, S. Kaul, & S. D. Rao (Eds.), *Current developments in air and space Law* (pp. 59-68). NLUD Press.

Manager Weekly. (2008, July 28). "Wan-Thu-Ko" thiap chan TG maetae fan yang yak cha pen ching ["One-Two-GO" Day dream to be on a par with TG]. *Manager 360° Magazine*. http://info.gotomanager.com/news/details.aspx?id=71719

Niță, M. F., & Scholz, D. (2011). Business opportunities in aircraft cabin conversion and refurbishing. *Journal of Aerospace Operations*, *1*(1-2), 129-153. https://doi.org/10.3233/AOP-2011-0008

Patton, E., & Appelbaum, S. H. (2003). The case for case studies in management research. *Management Research News*, *26*(5), 60-71. https://doi.org/10.1108/01409170310783484

Rahman, S. (2018). The emergence, development and role of ASEAN: An analysis. *FWU Journal of Social Sciences, 12*(1), 266-278.

Rediess, H. A. (n.d.). *A conceptual model for determining the highest potential payoff areas for NASA aeronautics investments* [White paper]. CiteSeerx. http://citeseerx.ist.psu.edu/viewdoc/summary?doi=10.1.1.173.536

Ricart, J. E., & Wang, D. (2005). Now everyone can fly: Air Asia. *Asian Journal of Management Cases, 2*(2), 231-255. https://doi.org/10.1177/097282010500200206

Saha, G. C., & Theingi. (2009). Service quality, satisfaction, and behavioural intentions. *Managing Service Quality: An International Journal*, *19*(3), 350-372. https://doi.org/10.1108/09604520910955348

Scott, S. (2009, April 12). EU adds to airline safety blacklist. *Defense Daily*. https://www.defensedaily.com/eu-adds-to-airline-safety-blacklist/uncategorized/

Smith, G. (2004). An evaluation of the corporate culture of Southwest Airlines. *Measuring Business Excellence*, *8*(4), 26-33. https://doi.org/10.1108/13683040410569389

Thanasupsin, K., Chaichana, S., & Pliankarom, S. (2010). Factors influencing mode selections of low-cost carriers and a full-service airline in Thailand. *Transportation Journal*, *49*(1), 35-47. http://www.jstor.org/stable/40904820

United States International Trade Commission. (1998). *The changing structure of the global large civil aircraft industry and market: Implications for the competitive of the U.S. industry* (Investigation No. 332-384). United States International Trade Commission.

Voigt, K.-I., Buliga, O., & Michl, K. (2017). Pioneer in the skies: The case of Southwest Airlines. In *Business model pioneers: How innovators successfully implement new business models* (pp. 171-184). Springer International Publishing.

Watson, P. (2007, September 17). Thai plane crash kills 90, including 4 US tourists. *Los Angeles Times*. https://www.latimes.com/archives/la-xpm-2007-sep-17-fg-thaicrash17-story.html

Woodley, C. (2018, April 19). DC-9 family short-haul success story. *Key.Aero*. https://www.key.aero/article/dc-9-family-short-haul-success-story

Yeung, S., Tsang, N., & Lee, Z. (2012). An importance–performance analysis of low cost carriers in Asia. *International Journal of Hospitality & Tourism Administration, 13*(3), 173-194. https://doi.org/10.1080/15256480.2012.698167

Zou, L., Yu, C., & Dresner, M. (2015). Fleet standardisation and airline performance. *Journal of Transport Economics and Policy (JTEP)*, *49*(1), 149-166.

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