SUFFICIENCY OF THE POLICIES RELATED TO CONSTRUCTION INDUSTRY IN SRI LANKA

JAYATUNGE D.A.S.R.¹, MENDIS A.P.K.D.² & DISARATNA VIJITHA³

1,2,3 University of Moratuwa, Colombo, Sri Lanka

¹sahanrandula95@gmail.com, ² dhaneeshamendis@gmail.com, ³ vijitha.disaratna@gmail.com

Abstract

Public policy on construction will reflect the economic, political, social, and cultural status of Sri Lanka. The construction industry in Sri Lanka has faced many issues in the recent past because of unsuccessful government policies. Therefore, an effective national policy for the construction industry has become necessary. Thus, the aim of this study was to examine the effectiveness of the existing construction policies. The empirical data required were collected by interviewing ten experts, who were selected using snowball sampling. The collected data were manually analysed using content analysis. The findings revealed that the National Policy on Construction (NPC), formulated by the National Advisory Council on Construction, which was set up under the Construction Industry Development Act No. 33 of 2014, is the only construction policy that has been formulated in Sri Lanka so far. NPC contains eighteen (18) policies applied for both the public and private sectors. Although according to the literature, policies in Sri Lanka change along with the change of governments, the study revealed that NPC, which has remained unchanged since its formulation in 2014, is still applicable in the country.

Keywords: Construction Industry; National Policy on Construction (NPC); Sufficiency Level.

1. Introduction

The construction industry in any country plays a significant role in economic development by contributing to the Gross Domestic Product (GDP) and creating employment opportunities (Dixit *et al.*, 2017). The industry is the main beneficiary of the increasing number of infrastructure projects that are being implemented to support rapid urban development in Sri Lanka, and is the fourth-largest industry in the country today, with its percentage contribution to the GDP during the past 10 years amounting to 6-7% (Jayalath and Gunawardhana, 2017). Besides, the government's construction policy represents the country's economic, political, social, and cultural status (Seaden and Manseau, 2001).

According to Khan (2016), a policy is typically a general statement on objectives, written laws or regulations, processes, and standards. In its simplest sense, policy refers to a definite course of action apposite for the achievement of one or more anticipated goals at intervals in a chosen context and at the preference of a company or individual (Mackay and Shaxton, 2005). The success of such a policy will, however, depend on the effective implementation of the policy (Rajapakshe, 2017). According to Meier, Ripley, and Franklin (2016), even the best policy will not be of any value if it is not applied effectively or correctly.

Stable government policy on construction will be very useful to overcome the numerous issues currently faced by the construction industry in Sri Lanka (Silva et al., 2008). Ratnasingham (2015) stated that a major concern of the industry is the changes made to construction policies as governments change. Past studies have discovered that these changes directly affect construction development (Finco, 2017). Loopholes that exist in the current construction policy can lead successive governments to change it to suit their agendas (Silva et al., 2008). An unstable construction policy will prevent the construction industry in Sri Lanka from being competitive with the construction industries of other developing countries (Ratnasingham, 2015). However, no detailed study has so far been conducted to reveal the shortcomings of the current policies on construction in Sri Lanka. Moreover, it is quite important to identify the current implementation level of the construction policies in Sri Lanka. Thus, the aim of this study was to examine the sufficiency of the existing policies on construction to ensure the competitiveness of the construction industry in Sri Lanka.

2. Literature Review

2.1. CONSTRUCTION INDUSTRY

The construction industry is a significant component of the national economy of a country since the industry is involved with the construction, reconstruction, maintenance, and demolition of buildings

in the country while contributing to the country's economic development (Timofeeva, Ulrikh and Tsvetkun, 2017). In Sri Lanka too, the construction industry is one of the significant contributors to the economy, while being a creator of employment (Ministry of Housing Construction & Culture Affairs, 2019).

GDP is an indicator of the growth of the economy of a country (Vijayaragunathan and Rasanthi, 2019). GDP is affected by periodic and unconditional recessions and booms in the national economy (Abdalla, 2016). The construction sector, which has an impact on GDP, is responsible for the industrialization of a country (Alaghbari, Al-Sakkaf and Sultan, 2019). The GDPs of developing countries have a tendency to decrease with oil price increases, power scarcities, and political uncertainties (Kira, 2013). According to the National Advisory Council on Construction [NACC] (2016) in Sri Lanka, the construction sector in the country performs a significant role in the economy of the country by creating employment opportunities for the industrial sector. Besides, the industry has a positive impact on the national economy because it stimulates economic development (Hosein and Lewis, 2015). By giving little consideration to the construction industry (Oladinrin, Ogunsemi and Aje, 2012), policymakers have failed to get the industry to drive the country towards economic development. Today, the construction industry in Sri Lanka is one of the most neglected industries in the country.

2.2. GOVERNMENT POLICY

A government of a country is a collection of public sector agents committed to effectively and successfully guide the units or communities in the country (Link and Scott, 2010). One of the main responsibilities of a government is to develop and manage the policy framework of the country. Moreover, government policy is a principle or a course of action that a governing body proposes or implements (Meier, Ripley and Franklin, 2016). The policies and regulations formulated by a government can either encourage or hinder the development of new strategies and innovations. Further, in any sector, significant and fundamental changes can be made through strict and focused policies and regulations (Patanakul and Pinto, 2014). The government can also make policy adjustments based on economic conditions prevailing in the country. Therefore, if a change in government policies becomes really necessary, the government has to avoid politically negative behaviour (Janssen and van der Voort, 2016).

According to Young (2013), by setting the foundation for all the people to operate through public policymaking, governments have the option to decide on the social goals they should pursue and the way those goals should be attained. According to Anderson (2010), public policy is also a collection of actions indicating the extensive framework required for a philosophy, concept, vision, or decision to be put into operation and transformed into numerous programs, projects, and actions. Though there are different definitions for public policy, the success of the public policy is indicated by how successful its implementation is. Unless a public policy is successfully implemented, it will not be possible to achieve the objectives of the policy (Meier, Ripley and Franklin, 2016).

2.3. Parties involved in the public policy cycle

The key players involved in policymaking get the opportunity to interact with one another at different stages of the policy cycle. Individuals, agencies, and institutions that interact with the policy process are called actors (Moran, Rein and Goodin, 2008). Governments are generally the only bodies interested in policymaking and have the authority to take policy decisions and prepare budgets, while the actors contribute to public policy, typically through the networks responsible for fulfilling the policy objectives of the government (Foxell and Cooper, 2015). According to Mackay and Shaxton (2005) the functions of the various stakeholders involved in the public policymaking process are as follows:

- Government: To serve as a public behaviour operator
- Public sector workers: To provide technical expertise and policy advice

- Political Parties: To develop linkages in exchange for political support
- Media: To generate interest among the public by reporting information and shaping public opinion
- Cabinet: To maintain a monopoly over the provision of legislation
- Interest Groups: To work towards furthering the interests of the members and to bring pressure on the political network to respond
- Legal system: To act independently and interpret the laws
- Public: To join interest groups and coalitions, form opinions, elect the government, and rely on the media for information.

2.4. GOVERNMENT CONSTRUCTION POLICIES IN GENERAL

Because of the absence of proper government policy on construction, the non-availability of sufficient funding for government projects, and the inefficient government procurement procedures, the construction industry experiences many difficulties (Hui *et al.*, 2011). The political instability of the government also has a huge impact on the construction industry since an unstable government will want to make swift changes in the public policies introduced by the previous governments (Silva, Rajakaruna and Bandara, 2008). The government has to develop clear and effective policies on construction, by defining national construction priorities and providing guidance on investment mobilisation. Further, preparation of a framework to promote the development of the local building industry through business enterprises, productivity improvements, and professional development will also be important (Khare and Agarwal, 2017).

All construction operations, such as any processes or activities necessary prior to the start and completion of the project, will be protected by the policies in the construction industry. Besides, organisations that conform according to the government's approved policy on procurement related to supplies, design plans, or perform certain construction activities may face fewer risks (Taofeeq, Adeleke and Hassan, 2019). Government policies would therefore overcome the deficiencies identified and ensure the long-term survival of the construction industry.

2.4.1. Government Policies on Construction in Sri Lanka

A major concern of the construction industry in Sri Lanka is the changes made to the policies on construction as the change of government (Wettasinghe, 2015). A former chairman of the Chamber of the Construction Industry in Sri Lanka, once mentioned that when a new government comes into power in the country, the contracts awarded during the time of the previous government are suspended and reviewed (Ratnasingham, 2015). Because of the various linkages that the construction industry has, the development of the construction industry in Sri Lanka will have a multiplier effect on national development (Ministry of Housing Construction & Culture Affairs, 2017). Therefore, a National Policy on Construction (NPC) is urgently required to be established through a holistic approach.

The NACC, established by the Construction Industry Development Act No. 33 of 2014, has been empowered to formulate a National Policy on Construction. According to the Ministry of Housing Construction & Culture Affairs (2017), the main objective of the NPC is to make the construction industry in Sri Lanka an efficient industry that can contribute to the national development through regulations, standards, capacity building, etc. The Ministry further states that the policy will identify the key roles and responsibilities of the different sectors of the industry and coordinate the policies and operating backgrounds of these different sectors to ensure complementarity. NPC will address all issues related to the matrix consisting of the various operating processes and multiple stakeholders of the construction industry because of the influence it has on the different sub-sectors of the economy (Ministry of Housing Construction & Culture Affairs, 2017). The main objectives of implementing NPC are to support human resource development, generate employment, reduce poverty, encourage social progress, ensure the availability of materials, plant, and equipment preferably through local production, and to create an environment that attracts infrastructure investment (Jayalath and Perera, 2019).

Several researchers have discussed the role of government policies and their effects (Taofeeq, Adeleke and Hassan, 2019; Taofeeq, Adeleke and Lee, 2020), and policy changes (Wong, 2019; Xiaopeng and Pheng, 2013) in the global context, while there are a few studies on the importance of government policies (Hettiarachchi, Morrison and McAlpine, 2019) and policy gaps that deter sustainable construction (Jayalath and Perera, 2019) in the Sri Lankan context. However, there is a dearth of literature on the sufficiency of the policies related to the construction industry in Sri Lanka. Since this research will further deliberate on the current implementation level of the existing national policy of construction in Sri Lanka in order to identify its sufficiency.

3. Methodology

A qualitative approach in research involves the collection of data on a problem or procedure from various parties who had encountered such a problem or followed such a procedure and the interpretation of that data by the researcher (Yilmaz, 2013; Amaratunga et al., 2002). Since the intention of this study was to examine the sufficiency of the policies related to the construction industry in Sri Lanka, the collection of in-depth opinions of experts was essential and the information obtained was evaluated descriptively. Thus, the study adopted the qualitative approach. The empirical data required was collected using ten semi-structured face-to-face interviews, each of 45-60 minute duration, conducted among knowledgeable and experienced experts associated with the construction industry. The experts were selected using the snowball sampling method, a non-probability sampling method. In snowball sampling, the study respondents are invited to help find other possible respondents and become "de facto" research assistants (Biernacki and Waldorf, 1981). When this sampling method is used, no specific sample size is required. The interviews were conducted until data saturation was reached. The data collected were manually analysed using content analysis.

4. Research Findings

Under this section, a detailed analysis was performed by collecting data through expert interviews.

4.1. WHAT IS PUBLIC POLICY?

Literature provides several definitions of public policy. At the interviewes, the interviewees were also asked to define public policy. The interviewees, while confirming the literature review findings, mentioned that public policy is like the vision of a company, which can be implemented through the mission of the company. The National Construction Policy is, therefore, the vision of the Sri Lankan construction industry. The policy and its implementation mechanism should help to achieve the policy objectives of the industry. The interviewees also mentioned that any public policy should address public requirements, uphold public accountability, and contribute to the public welfare. They further stated that public policy is a statement prepared by the government to cater to the requirements of the country and that it should not contain many details. The interviewees further mentioned that the policy should be fair and reasonable to all stakeholders and that it should not contradict or violate other policies. They were also of the view that public policy is a guide to the actions that have to be taken by the public. Thus, public policy can be defined as follows:

"Public policy is the vision statement of a country, which addresses public requirements, uphold public accountability, and contribute to the public while being fair and reasonable to all the stakeholders"

4.2. SUFFICIENCY OF THE CONSTRUCTION POLICIES FOR THE EFFECTIVE OPERATION OF THE CONSTRUCTION INDUSTRY IN SRI LANKA

Under this Section, the respondents' ideas on the need of a construction policy to Sri Lanka and sufficiency of the existing policies related to the construction industry were discussed.

4.2.1. Need of a Construction Policy in Sri Lanka

The interviewees emphasised that a construction policy is required to ensure the development of the construction industry in the country. A policy is similar to the vision of a county. Thus, construction industry stakeholders can use the construction policy as a guideline when conducting their construction-related activities. According to the interviewees, for a developing country like Sri Lanka, a proper construction policy is essential if the construction industry is to be properly monitored, especially because the industry is one of the major contributors to the country's GDP. The interviewees also mentioned that a policy on construction is required to cater to the needs of the construction industry. Most of them were of the view that policies are required in an industry to ensure its consistency and stability as otherwise situations can arise which no one will be prepared to handle. According to interviewees, policies can significantly influence the development of the construction industry.

4.2.2. Sufficiency of Construction Policies

Concerning the sufficiency of the current National Policy on Construction to cater to the construction industry requirements in Sri Lanka, most of the interviewees stated that since NPC is the first such policy established for the construction industry in Sri Lanka, its effectiveness can be determined only after it has been implemented for several years. Some of the interviewees, on the other hand, mentioned that there are areas that have not been covered by NPC. For example, Building Information Modelling (BIM) for construction activities has not been covered in the policy although in other countries BIM for construction activities has been covered by their national construction policies. The interviewees were also of the view that the use of solar energy and green technology in construction should be included in any policy on construction. They also recommended that making all due payments under a contract within 90 days, should be made a legal requirement. Thus, according to the views expressed by the interviewees, the provisions made in NPC are sufficient at present for the effective operation of the construction industry in Sri Lanka. However, according to the interviewees, the proper implementation of the policy would be a challenge given the culture of the country's construction industry.

4.2.3. Current Level of Implementation of the National Policy on Construction

Table 1 lists the summary of the opinions expressed by the interviewees on the current level of implementation of NPC.

Table 1: Policy-wise implementation level of NPC

Policy	Current Level of Implementation
NPC1 – Provide strategic leadership to the stakeholders of the construction industry to stimulate sustainable growth, reforms, and improvement of the construction sector	To some extent
NPC2 – Regulate and monitor the activities of all stakeholders of the construction industry as may be prescribed from time to time	To a great extent
NPC3 – Promote sustainable economic growth of the construction industry with special attention to the design and development of disaster-resilient, energy-efficient, and environmentally sustainable buildings, structures and construction practices	To some extent
NPC4 – Promote innovation, research, dissemination, and publication of research work on matters relating to the construction industry and its development	To some extent
NPC5 – Establish national standards and specifications for the construction Industry	To a great extent
NPC6 – Establish codes of conduct, practices, procedures, processes, and documentation to promote good practices relating to the construction industry	To some extent
NPC7 – Enhance human capital, professionalism, efficiency, and productivity of the human resource of the construction industry	To some extent
NPC8 – Enhance occupational safety and health standards and practices in the Construction Industry	To some extent

Policy	Current Level of Implementation
NPC9 – Enhance the use of Information Technology to improve the efficiency and productivity of the construction industry processes	Not implemented as yet
NPC10 – Promote access to overseas markets for Construction Companies and personnel	To some extent
NPC11 – Create an enabling environment for local and foreign investment in the construction Industry	Not implemented as yet
NPC12 – Establish a monitoring and evaluation procedure to ensure compliance of industry practices including disaster-resilient construction standards & practices, with the National Construction Policy	To some extent
NPC13 – Promote domestic participation in foreign-funded construction projects implemented by foreign contractors and consultants	Not implemented as yet
NPC14 – Encourage private sector participation in policy development	Not implemented as yet
NPC15 – Encourage effective management of construction projects by the industry	Not implemented as yet
NPC16 – Establish Codes of Conduct among partners of the industry	To some extent
NPC 17 – Encourage Human Resource Development in the Construction Industry	Not implemented as yet
NPC18 – Establish appropriate procurement practices in the Construction Industry	Not implemented as yet

As can be seen from Table 1, seven of the eighteen policies have still not been implemented. Only two policies have been implemented in the industry "to a great extent" and the rest of the policies have been implemented only "to some extent". Thus, not a single policy has been fully implemented. Although NPC mentions the implementation mechanism for each policy, the interviewees indicated that most of those mechanisms are not being implemented in the industry.

Although the results of the literature have indicated that modifications made to construction policies by various governments are a major concern in Sri Lanka (Ratnasingham, 2015), respondents have reported that the only construction policy in Sri Lanka is the NPC devised by the NACC with the provisions of Construction Industry Growth Act No. 33 of 2014. Although the NPC as a whole is more than adequate for the growth of the construction industry in Sri Lanka, the relevant stakeholders have ignored the proper implementation of the policy. The true advantage of formulating this policy would not be accomplished if it were not properly implemented. This was reinforced by Hudson, Hunter and Peckham (2019) when they claimed that there is increasing consensus that a policy will not be a success or failure of its own, but that its effectiveness will depend on its implementation.

5. Conclusions and recommendations

This paper presents the policies established in Sri Lanka for the construction industry and the sufficiency of those policies for the effective operation of the construction industry in the country. A literature review was first carried out to identify in the global context the need for policies related to the construction industry. Construction policies were found to help the construction industry to develop, leading to the overall development of the country. Because of the significant contribution that the construction industry makes to the national economy, a proper national policy on construction has to be in place. A proper policy will cater to the needs of the industry and guide the industry to be effective and efficient. Policies can promote the economic activities of the country and influence the development of the construction industry. A policy should not be confined to a set of words in a document but should be implemented to ensure the development of the industry. The only policy related to the construction industry in Sri Lanka was found to be the NPC formulated in 2014 by the NACC. The policy has eighteen sub-policies and it was found that these sub-policies are still sufficient for the effective operation of the construction industry in Sri Lanka. However, the interviews revealed that many barriers are present to implement the mechanisms stipulated for the eighteen subpolicies. The real benefit of formulating this policy would not be achieved if it were not correctly utilised. Therefore, it is recommended to examine the barriers that hinder the implementation of the

sub-policies of NPC and identify the strategies that can be adopted to overcome those barriers so that the policy-makers can adapt those strategies to overcome the barriers, based on their relative importance, to achieve the goal of NPC.

6. References

Abdalla, S. Z. S. (2016) *Modelling the sources and the impacts of macroeconomic fluctuations in Sudan*. Institute of Developing Economies. Available at: https://www.ide.go.jp/library/English/Publish/Download/Vrf/pdf/495.pdf.

Alaghbari, W., Al-Sakkaf, A. A. and Sultan, B. (2019) 'Factors affecting construction labour productivity in Yemen', *International Journal of Construction Management*, 19(1), pp. 79–91. doi: 10.1080/15623599.2017.1382091.

Amaratunga, D. et al. (2002) 'Quantitative and qualitative research in the built environment: Application of "mixed" research approach', Work Study, 51(1), pp. 17–31. doi: 10.1108/00438020210415488.

Anderson, J. E. (2010) Public policy making - An introduction. 7th edn. Boston MA: Wadsworth.

Biernacki, P. and Waldorf, D. (1981) 'Snowball sampling', in *Sociological Methods and Research*. SAGE Publications, pp. 141–163.

Dixit, S. et al. (2017) 'A Study of enabling factors affecting construction productivity: Indian scenario', *International Journal of Civil Engineering and Technology*, 8(6), pp. 741–758. doi: 10.1017/S0266467403006072.

Finco (2017) The Sri Lankan construction sector's increased investment and development, Finex Engineering (Pvt) Ltd. Available at: http://www.fincoengineering.com/the-sri-lankan-construction-sectors-increased-investment-and-development/ (Accessed: 23 February 2020).

Foxell, S. and Cooper, I. (2015) 'Closing the policy gaps', *Building Research and Information*. Taylor & Francis, 43(4), pp. 399–406. doi: 10.1080/09613218.2015.1041298.

Hettiarachchi, M., Morrison, T. H. and McAlpine, C. (2019) 'Power, politics, and policy in the appropriation of urban wetlands: The critical case of Sri Lanka', *The Journal of Peasant Studies*. Taylor & Francis, 46(4), pp. 729–746. doi: 10.1080/03066150.2017.1393801.

Hosein, R. and Lewis, M. T. (2015) 'Quantifying the relationship between aggregate GDP and construction value added in a small petroleum rich economy – a case study of Trinidad and Tobago', *Construction Management and Economics*, 23, pp. 185–197. doi: 10.1080/0144619042000287741.

Hudson, B., Hunter, D. and Peckham, S. (2019) 'Policy failure and the policy-implementation gap: Can policy support programs help?', *Policy Design and Practice*, 2(1), pp. 1–14. doi: 10.1080/25741292.2018.1540378.

Hui, W. S. et al. (2011) 'Procurement issues in Malaysia', International Journal of Public Sector Management, 24(6), pp. 567–593. doi: 10.1108/09513551111163666.

Janssen, M. and van der Voort, H. (2016) 'Adaptive governance: Towards a stable, accountable and responsive government', *Government Information Quarterly*, 33(1), pp. 1–5. doi: 10.1016/j.giq.2016.02.003.

Jayalath, A. and Gunawardhana, T. (2017) Towards sustainable constructions: Trends in Sri Lankan construction industry', *International Conference on Real Estate Management and Valuation 2017*, pp. 137–143. doi: 10.1354/vp.08-VP-0277-M-FI.

Jayalath, C. and Perera, B. A. K. S. (2019) 'Policy gaps that deter fostering sustainable construction in Sri Lanka', in Sandanayake, Y. G., Gunatilake, S., and Waidyasekara, A. (eds) *Proceedings of the 8th World Construction Symposium*. Colombo, Sri Lanka, pp. 484–492. doi: 10.31705/WCS.2019.48.

Khan, A. R. (2016) 'Policy implementation: Some aspects and issues', *Journal of Community Positive Practices*, 25(3), pp. 3–12. doi: 10.2307/975319.

Khare, P. and Agarwal, P. (2017) 'Effect of economic slowdown on construction industry', *International Journal of Engineering Development and Research*, 5(2), pp. 257–260. Available at: https://www.ijedr.org/papers/IJEDR1702043.pdf.

Kira, A. R. (2013) 'The factors affecting Gross Domestic Product (GDP) in developing countries: The case of Tanzania', European Journal of Business and Management, 5(4), pp. 148–158. Available at: https://www.iiste.org/Journals/index.php/EJBM/article/viewFile/4476/4544.

Link, A. N. and Scott, J. T. (2010) 'Government as entrepreneur: Evaluating the commercialization success of SBIR projects', *Research Policy*, 39(5), pp. 589–601. doi: 10.1016/j.respol.2010.02.006.

Mackay, M. and Shaxton, L. (2005) *Understanding and applying basic public policy concepts*. Available at: https://s3.amazonaws.com/academia.edu.documents/44897869/understandingandapplyingbasicpublicpolicyconcepts.pdf? response-content-disposition=inline%3B filename%3DUnderstanding_and_Applying_Basic_Public.pdf&X-Amz-

Algorithm=AWS4-HMAC-SHA256&X-Amz-Credential=AKIAIWOWYYGZ2Y53UL3A%2F20200212%2Fus-east-1%2Fs3%2Faws4 request&X-Amz-Date=20200212T111907Z&X-Amz-Expires=3600&X-Amz-SignedHeaders=host&X-

Amz-Signature=b31634fa5eod6523073d8617755363c735efa7bd4550f24b368554eadafd86d2.

Meier, K. J., Ripley, R. B. and Franklin, G. A. (2016) 'Policy implementation: Some aspects and issues', *Journal of Community Positive Practices*, 16(3), pp. 3–12. doi: 10.2307/975319.

Ministry of Housing Construction & Culture Affairs (2017) National construction policy. Colombo.

Ministry of Housing Construction & Culture Affairs (2019) *National construction policy*. Available at: https://houseconmin.gov.lk/construction-policy/ (Accessed: 29 March 2020).

Moran, M., Rein, M. and Goodin, R. E. (2008) 'The origins of policy', in *The oxford handbook of public policy*. New York: Oxford University Press, pp. 1–21. doi: 10.1093/oxfordhb/9780199548453.003.0010.

National Advisory Council on Construction (2016) National policy on construction. Colombo.

Oladinrin, T., Ogunsemi, D. and Aje, I. (2012) 'Role of construction sector in economic growth: Empirical evidence from Nigeria', *FUTY Journal of the Environment*, 7(1), pp. 50–60. doi: 10.4314/fje.v7i1.4.

Patanakul, P. and Pinto, J. K. (2014) 'Examining the roles of government policy on innovation', *The Journal of High Technology Management*, 25(2), pp. 97–107. doi: 10.1016/j.hitech.2014.07.003.

Rajapakshe, W. (2017) 'Factors affecting management resources management policy implementation in small and medium enterprises (SMEs) in Sri Lanka', *International Journal of Academic Research in Business and Social Sciences*, 7(12), pp. 1129–1144.

Ratnasingham, A. (2015) 'Sri Lanka's construction industry lacks proper policy', *Lanka Business Online*, 19 August. Available at: http://www.lankabusinessonline.com/sri-lankas-construction-industry-lacks-proper-policy-official/.

Seaden, G. and Manseau, A. (2001) 'Public policy and construction innovation', *Building Research and Information*, 29(3), pp. 182–196. doi: 10.1080/09613210010027701.

Silva, N. De, Rajakaruna, R. W. D. W. C. A. B. and Bandara, K. A. T. N. (2008) 'Challenges faced by the construction industry in Sri Lanka: Perspective of clients and contractors', in *Proceedings of International Conference on Building Education and Research*, pp. 158–169. doi: 10.1002/sim.6728.

Taofeeq, D., Adeleke, A. Q. and Hassan, A. (2019) 'The moderating role of government policy on contractors' risk attitudes in Malaysia construction companies', *Social Science and Humanities Journal*, 3(6), pp. 1261–1280. Available at: http://sshj.in/index.php/sshj/article/view/398.

Taofeeq, D. M., Adeleke, A. Q. and Lee, C. (2020) 'The synergy between human factors and risk attitudes of Malaysian contractors': Moderating eff ct of government policy', *Safety Science*, 121, pp. 331–347. doi: 10.1016/j.ssci.2019.09.016.

Timofeeva, S. S., Ulrikh, D. V and Tsvetkun, N. V (2017) 'Professional risks in construction industry', in *International Conference on Industrial Engineering*. Elsevier B.V., pp. 911–917. doi: 10.1016/j.proeng.2017.10.571.

Vijayaragunathan, S. and Rasanthi, T. (2019) 'An insight to women in construction for fostering female careers in Sri Lankan construction industry', *Journal of International Women's Studies*, 20(3), pp. 168–173. Available at: https://vc.bridgew.edu/cgi/viewcontent.cgi?article=2133&context=jiws.

Wettasinghe, C. (2015) National policy on construction vital: CCI, Daillymirror. Available at: http://www.dailymirror.lk/75569/national-policy-on-construction-vital-cci (Accessed: 29 April 2020).

Wong, N. (2019) 'Environmental policy change in two transitional societies: A comparative study on anti-incinerator construction in Guangzhou and Taipei Environmental policy change in two transitional societies: a comparative study on anti-incinerator construction in Gu', *Asian Geographer*. Taylor & Francis, pp. 1–16. doi: 10.1080/10225706.2018.1547201.

Xiaopeng, D. and Pheng, L. S. (2013) 'Understanding the critical variables affecting the level of political risks in international construction projects', *Journal of Civil Engineering*, 17(5), pp. 895–907. doi: 10.1007/s12205-013-0354-5.

Yilmaz, K. (2013) 'Comparison of quantitative and qualitative research traditions: Epistemological, theoretical, and methodological differences', European Journal of Education, 48(2), p. 16.

Young, S. P. (2013) Evidence based policy making in Canada. Don Mills: Oxford University Press.