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On Studying the Hierarchical Inter-relationships Amongst the Various Success Factors and Benefits of Using PESTLE Analysis and How it Influence Finance Firms and Financial Services Industry

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ABSTRACT

Present paper focuses on reviewing PESTLE analysis and its application in Finance firm. Thereafter, it tries to establish hierarchical inter-relationships amongst them using ISM methodology.

Keywords: PESTLE Analysis, Finance firm, ISM methodology framework

PESTLE is an acronym that stands for **P**olitical, **E**conomic, **S**ocio-cultural, **T**echnological, **L**egal and **E**nvironmental factors. PESTLE analysis gives the businessman a chance to view the business prospects through the lens of the entire economy. It helps comprehend the business position taking into account all the macroeconomic forces.

(a) Pestle analysis of a finance firm and financial services industry in India

India is one of the world's most powerful economies. However, in foreign policy, India has several border disputes with China and Pakistan regarding Kashmir. In addition, there was a particular shift in the domestic political situation in 2019, which is connected with the law on citizenship (Wajid & Zafar, 2021). India is one of the largest economies in the world in terms of GDP. According to the data, the GDP is about 2.5 trillion dollars (Dahiya & Kumar, 2020).

(b) Pestle analysis of a finance firm

Political Factors: Broadly speaking, political factors are those driven by government actions and policies. They include Corporate taxation; other fiscal policy initiatives; Free trade disputes and Antitrust and other anti-competition issues.

Economic Factors: Economic factors relate to the broader economy and tend to be expressly financial in nature. They include Interest rates; Employment rates; Inflation and Exchange rates. For example, based on the present economic cycle and treasury yields' financial situations, an equity research analyst may adjust the discount rate in their model assumptions.

Social Factors: Social factors refer to shifts or evolutions which can impact commercial activity. For example, demographic considerations; Lifestyle

trends; Consumer beliefs and attitudes around working conditions. Post-pandemic, management at a technology firm has had to seriously reevaluate hiring, onboarding, and training practices after employees indicated a preference for a hybrid, work-from-home (WFH) model.

Technological Factors: Management teams and analysts alike must understand how technological factors may impact an organization or an industry. They includes automation; technology infrastructure (like 5G, IoT, etc.) and Cyber security. The speed and scale of technological disruption in the present business environment are unprecedented, and it has had a devastating impact on many traditional businesses and sectors.

Environmental Factors: Environmental factors emerged as a sensible addition to the original PEST framework as the business community began to recognize that changes to our physical environment can present material risks and opportunities for organizations. Examples of environmental considerations are Carbon footprint ; Climate change impacts, including physical and transition risks; increased incidences of extreme weather events. For example , Management at a publicly traded firm must reevaluate internal record keeping and reporting tools in order to track greenhouse gas emissions after the stock exchange announced mandatory climate and ESG disclosure for all listed companies.

Legal Factors: Legal factors include, but are not limited to industry regulation ; Licenses and permits; Employment and consumer protection laws and Protection of intellectual property. Other examples includes financial analysts may adjust model assumptions such as revenue growth rates and gross margins based on inflation expectations.

(c) Pestle analysis and its associated factors for financial services industry

Financial services are an essential part of the modern economies. This industry comprises of variety of firms and institutions e.g. banks, credit card companies, insurance companies, building societies, lenders, and real estate brokers.

Political factors that affect the financial services industry: Factors to consider include but not limited to legislation and regulation, public policy issues, and the geopolitical environment. In many countries, financial services industry may or may not be at the top of the national election campaign agenda.

Economic factors that affect the financial services industry: The macroeconomic factors affecting the financial services industry can have a significant influence on the profitability of the institutions involved. For instance, if a country experiences a recession, then the profitability of financial institutions is likely to be negatively affected, as the demand for debt financing is likely to fall. On the other hand, if a country experiences steady economic growth, then the profitability of financial institutions is likely to be positively affected, as the demand for debt financing is likely to go up.

Social factors that affect the financial services industry: The social factors that affect the financial services industry include demographics, lifestyle change and increasing population size. For example, a growing population of senior citizens will demand a lot of financial services such as retirement planning and healthcare. Similarly, social and cultural factors that exist in a country can affect the demand for products and services within the financial services industry, particularly those related to debt financing.

Technological factors that affect the financial services industry: Tessel (2020) states that technology gives people more visibility of all their financial information in a timely fashion. They can check out their credit score, and balance in their bank accounts online. Artificial Intelligence can help them make more educated decisions on cash flow and forecasting.

Environmental factors that affect the financial services industry: The financial services industry has taken several environmentally friendly initiatives such as paper less bank statements. However, Mullan, West, and Braithwaite (2021) state that the physical parts and activities of the financial services industry have a direct effect on emissions and therefore, firms need to adapt to the requirements of meeting net zero targets by the government.

Legal factors that affect the financial services industry: Different countries have different laws and regulations that affect the industry differently. Financial markets and some participants in those

markets may also be regulated by some market regulators. Anyone found committing financial crime are subjected to different penalties and sentences. In the UK, the main fraud offences are contained in the Fraud Act 2006 and Theft Act 1968.

Paper is arranged as follows. Section 2 briefly explains the success factors for using PESTLE analysis in financing and financial services industry. ISM methodology is described in section 3.

Success factors of using PESTLE Analysis in finance and financial industry [Peterd (2023); Tessel (2020)]

PESTLE analysis is a robust tool that provides several important benefits to the corporate world. They include:

1. **Commitment of time and effort [CTE]:** A commitment of time and effort is the only cost incurred in PESTLE analysis. No monetary prices are spent on it, making it one of the best cost-effective analytical frameworks in use.

2. **Better understanding of product launch environment [PDE]:** PESTLE analysis keeps businesses firm footed as they are conscious of the environment and can modify the product according to the changing trends.

3. **Regular analysis to avoid threats [AAT]:** Regular PESTLE analysis keeps the businessman aware of the potential threats and avoids such possibilities by corrective actions. For example, complying with necessary labour norms in advance to avoid legal sanctions.

4. **Tapping opportunities [TO]:** The systematic framework explains how the firms can utilize the changing PESTLE factors to their advantage.

5. **Workforce planning [WP]:** Developing the workforce requires the alignment of business and personal goals. PESTLE analysis helps identify the key issues that prevent it and helps create a long-term committed workforce.

6. **Strategic business planning [SBP]:** Valuable insights from the PESTLE analysis immensely aid business planning. They indicate the areas of focus and direct the course of future actions by its top management. It helps address weaknesses and harness the strengths of the company systematically.

7. **Marketing groundwork [MG]:** Evaluation of PESTLE factors helps understand critical market trends in the external environment. It helps to plot the marketing groundwork for the product by fulfilling the most key marketing objectives.

8. **Product development [PD]:** PESTLE analysis gives better awareness about the product through consumer inputs. This response helps the firm in developing the product through constant improvements and advancements.

9. **Organizational revamp [OR]:** The exploration of the macroeconomic PESTLE factors helps in identifying the reason for organizational revamp.

10. **Framework for evaluating political, economic, social, technological, legal and environmental factors [FePESTLE] :** PESTLE analysis helps a company weigh its performance by looking into the broad political, economic, social, technological, legal, and environmental factors influencing it. It helps a business gauge the favorable conditions in its launch stage, entry-stage into a new market or during its life-cycle.

11. **Mapping technique [MT]:** The analytical framework gives a bird-eye view of the company's present stance and a sneak peeks into the future trends. These insights also help the business to make decisions concerning the near future and plan its course of action for the long term.

12. **Strategic planning tool [SPT]:** The study of PESTLE elements makes the corporations aware of the environment they are operating in. Better know-how of this environment gives them a competitive edge over other players and helps in strategic decision-making.

Some of the disadvantages of Pestle analysis includes time taking approach; inconsistent; unreliable; complex analysis.

ISM methodology

Suggested by Warfield (1974), ISM works with the following steps: It starts with identifying the relevant elements and pair-wise establishing the contextual relationship amongst them. Thereafter, a structural self-interaction matrix (SSIM) may be developed between two variables i.e. *i* and *j* establishing a "Lead to" relationship between criteria. Four symbols viz. *V, A*, X & *O* are used for establishing the relationships. This is followed by creation of initial reachability matrix and final reachability matrix after the transitivity rule is checked. After that, a level partition matrix can be obtained based on establishing the precedence relationships and arranging the elements in a topological order. A Mic-Mac analysis is performed categorizing the variables in to autonomous, dependent, driver and linkage category. Finally, a diagraph can be obtained.

Case example

The various success factors or benefits of conducting PESTLE analysis *viz.* Commitment of time and effort [CTE]; Better understanding of product launch environment [PDE]; Regular analysis to avoid threats [AAT]; Tapping opportunities [TO]; Workforce planning [WP]; Strategic business planning [SBP]; Marketing groundwork [MG]; Product development [PD]; Organizational revamp [OR]; Framework for evaluating political, economic, social, technological, legal and environmental factors [FePESTLE]; Mapping technique [MT]; Strategic planning tool [SPT] needs to explored further for possible hierarchical interrelationships using ISM methodology.

Table 1: SSIM matrix for pair wise relationship amongst success factors of conducting PESTLE analysis

Sl. No.	Barriers	1 CTE	2 PDE	3 AAT	4 TO	5 WP	6 SBP	7 MG	8 PD	9 OR	10 Fe PESTLE	11 MT	12 SPT
1	CTE		V	V	V	V	V	V	V	V	V	V	V
2	PDE			V	V	V	V	V	V	V	V	V	V
3	AAT				A	A	A	A	A	A	A	A	A
4	TO					A	A	A	A	A	A	A	A
5	WP						V	V	V	V	V	V	V
6	SBP							V	V	V	V	V	V
7	MG								V	V	V	X	X
8	PD									V	V	V	V
9	OR										V	V	V
10	FePESTLE											V	V
11	MT												V
12	SPT												

Table 2: IRM matrix for pair wise relationship amongst success factors of conducting PESTLE analysis

Sl. No.	Barriers	1 CTE	2 PDE	3 AAT	4 TO	5 WP	6 SBP	7 MG	8 PD	9 OR	10 Fe PESTLE	11 MT	12 SPT
1	CTE	1	1	1	1	1	1	1	1	1	1	1	1
2	PDE	0	1	1	1	1	1	1	1	1	1	1	1
3	AAT	0	0	1	0	0	0	0	0	0	0	0	0
4	TO	0	0	1	1	0	0	0	0	0	0	0	0
5	WP	0	0	1	1	1	1	1	1	1	1	1	1
6	SBP	0	0	1	1	0	1	1	1	1	1	1	1
7	MG	0	0	1	1	0	0	1	1	1	1	1	1
8	PD	0	0	1	1	0	0	0	1	1	1	1	1
9	OR	0	0	1	1	0	0	0	0	1	1	1	1
10	FePESTLE	0	0	1	1	0	1	0	0	0	1	1	1
11	MT	0	0	1	1	0	0	0	0	0	0	1	1
12	SPT	0	0	1	1	0	0	0	0	0	0	0	1

Table 3: FRM matrix for pair wise relationship amongst success factors for conducting Pestle Analysis in finance

Sl. No.	Barriers	1 CTE	2 PDE	3 AAT	4 TO	5 WP	6 SBP	7 MG	8 PD	9 OR	10 Fe PESTLE	11 MT	12 SPT	D.P
1	CTE	1	1	1	1	1	1	1	1	1	1	1	1	12
2	PDE	0	1	1	1	1	1	1	1	1	1	1	1	11
3	AAT	0	0	1	0	0	0	0	0	0	0	0	0	1
4	TO	0	0	1	1	0	0	0	0	0	0	0	0	2
5	WP	0	0	1	1	1	1	1	1	1	1	1	1	10
6	SBP	0	0	1	1	0	1	1	1	1	1	1	1	9
7	MG	0	0	1	1	0	0	1	1	1	1	1	1	8
8	PD	0	0	1	1	0	0	0	1	1	1	1	1	7
9	OR	0	0	1	1	0	0	0	0	1	1	1	1	6
10	FePESTLE	0	0	1	1	0	1	0	0	0	1	1	1	6
11	MT	0	0	1	1	0	0	0	0	0	0	1	1	4
12	SPT	0	0	1	1	0	0	0	0	0	0	0	1	3
	De.P	1	2	12	11	3	4	5	6	7	8	9	10	

Level partition Matrices

Iteration I

Reachability set	Antecedent set	Intersection set	Iteration
3	1,2,3,4,5,6,7,8,9,10,11,12	**3**	
3,4	1,2,4,5,6,7,8,9,10,11,12	4	
3,4,12	1,2,5,6,7,8,9,10,11,12	12	
3,4,11,12	1,2,4,5,6,7,8,9,10,11	11	
3,4,10,11,12	1,2,4,5,6,7,8,9,10	10	
3,4,9,10,11,12	1,2,4,5,6,7,8,9,10	9	
3,4,8,9,10,11,12	1,2,4,5,6,7,8,9,10	8	**I**
3,4,7,8,9,10,11,12	1,2,4,5,6,7,8,9,10	7	
3,4,6,7,8,9,10,11,12	1,2,4,5,6,10	6	
3,4,5,6,7,8,9,10,11,12	1,2,4,5	5	
2,3,4,5,6,7,8,9,10,11,12	1,2	2	
1,2,3,4,5,6,7,9,10,11,12	1	1	

Iteration II

Reachability set	Antecedent set	Intersection set	Iteration
4	**1,2,4,5,6,7,8,9,10,11,12**	**4**	
4,12	1,2,5,6,7,8,9,10,11,12	12	
4,11,12	1,2,4,5,6,7,8,9,10,11	11	
3,4,10,11,12	1,2,4,5,6,7,8,9,10	10	
3,4,9,10,11,12	1,2,4,5,6,7,8,9,10	9	
3,4,8,9,10,11,12	1,2,4,5,6,7,8,9,10	8	**II**
3,4,7,8,9,10,11,12	1,2,4,5,6,7,8,9,10	7	
3,4,6,7,8,9,10,11,12	1,2,4,5,6,10	6	
3,4,5,6,7,8,9,10,11,12	1,2,4,5	5	
2,3,4,5,6,7,8,9,10,11,12	1,2	2	
1,2,3,4,5,6,7,8,9,10,11,12	1	1	

Iteration III

Reachability set	Antecedent set	Intersection set	Iteration
12	**1,2,5,6,7,8,9,10,11,12**	**12**	
11,12	1,2,5,6,7,8,9,10,11	11	
10,11,12	1,2,5,6,7,8,9,10	10	
9,10,11,12	1,2,5,6,7,8,9,10	9	
8,9,10,11,12	1,2,5,6,7,8,9,10	8	
7,8,9,10,11,12	1,2,5,6,7,8,9,10	7	III
6,7,8,9,10,11,12	1,2,5,6,10	6	
,5,6,7,8,9,10,11,12	1,2,5	5	
2,5,6,7,8,9,10,11,12	1,2	2	
1,2,5,6,7,8,9,10,11,12	1	1	

Iteration IV

Reachability set	Antecedent set	Intersection set	Iteration
11	1,2,5,6,7,8,9,10,11	11	
10,11	1,2,5,6,7,8,9,10	10	
9,10,11	1,2,5,6,7,8,9,10	9	
8,9,10,11	1,2,5,6,7,8,9,10	8	
7,8,9,10,11	1,2,5,6,7,8,9,10	7	IV
6,7,8,9,10,11	1,2,5,6,10	6	
5,6,7,8,9,10,11	1,2,5	5	
2,5,6,7,8,9,10,11	1,2	2	
1,2,5,6,7,8,9,10,11	1	1	

Iteration V

Reachability set	Antecedent set	Intersection set	Iteration
10	1,2,5,6,7,8,9,10	10	
9,10	1,2,5,6,7,8,9,10	9	
8,9,10	1,2,5,6,7,8,9,10	8	
7,8,9,10	1,2,5,6,7,8,9,10	7	
6,7,8,9,10	1,2,5,6,10	6	V
5,6,7,8,9,10	1,2,5	5	
2,5,6,7,8,9,10	1,2	2	
1,2,5,6,7,8,9,10	1	1	

Iteration VI

Reachability set	Antecedent set	Intersection set	Iteration
9	1,2,5,6,7,8,9	9	
8,9	1,2,5,6,7,8,9	8	
7,8,9	1,2,5,6,7,8,9	7	
6,7,8,9	1,2,5,6	6	VI
5,6,7,8,9	1,2,5	5	
2,5,6,7,8,9	1,2	2	
1,2,5,6,7,8,9	1	1	

Iteration VII

Reachability set	Antecedent set	Intersection set	Iteration
8	1,2,5,6,7,8	**8**	
7,8	1,2,5,6,7,8	7	
6,7,8	1,2,5,6	6	**VII**
5,6,7,8	1,2,5	5	
2,5,6,7,8	1,2	2	
1,2,5,6,7,8	1	1	

Iteration VIII

Reachability set	Antecedent set	Intersection set	Iteration
7	1,2,5,6,7	7	
6,7	1,2,5,6	6	
5,6,7	1,2,5	5	**VIII**
2,5,6,7	1,2	2	
1,2,5,6,7	1	1	

And similarly factors 6 , 5 , 2 and 1 got the iterations as IX, X, XI and Iteration XII respectively.

Driving power and dominance diagram

Table 4: Driving Power & Dominance Diagram (MICMAC analysis)

		1	2	3	4	5	6	7	8	9	10	11	12
	12	CTE											
	11		PDE										
	10			WP									
	9				SBP								
Driving power	8		Drivers						Linkage				
	7						PD						
	6						FEPESTLE	OR					
	5								MG				
	4		Autonomous						Dependent	MT			
	3										SPT		
	2												TO
	1												AAT

CONCLUSION

Present research tries to establish the inter-relationships amongst the benefactors and challenges in architectural designing of smart cities with the help of ISM methodology. This is a draft paper which needs to be modified in the light of comments from anonymous reviewers.

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