Investigative Study on Disparities in Small and Medium Enterprises (SMEs) Financing Pertaining To Surgical Instruments Cluster

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Abstract

Small and medium enterprises (SMEs), are regarded as propellers of job creation, technological advancement, and economic growth. In Pakistan, 99% percent of all enterprises are SMEs' employing more than 70% of non-agriculture labor. Surgical instruments manufacturing industry of Sialkot comprising SMEs contributes sizably to Gross Domestic Product (GDP) and exports. Recent studies has highlighted lack of financing options for SMEs' and the necessity to determine the responsible factors. Here we report disparities and liable underlying variables in SMEs' financing especially for surgical instruments cluster located at Sialkot, Pakistan. Results of pilot study discussed with a focus group comprised of 5 firms. Improved questionnaire were administered among 197 firms selected through convenience sampling technique, of which 100 firms responded. Purposive sampling is used to conduct in-depth interviews from 20 firms followed by transcription, content analysis, and themes identification. Data analysis includes reports drawn from NVivo on the basis of word frequency, numbers of paragraph coded and reveals profound statistical relationship among variables. Chi-square test confirms disparities in SMEs' finance by financial institutions due to non-availability of accounting & financial record; cumbersome procedures; high interest rates, lack of entrepreneurial skills to prepare business plans; and regulatory issues related to the Government.

Keywords: SMEs' Financing; Entrepreneurial Skills; Surgical Cluster, Sialkot.

Introduction

The phenomenon of job creation, technological innovation, and regional growth is attributed to new, small firms by plentiful philosophers dating back to Schumpeter (Audretsch, 2002; Luger & Koo, 2005). Small and medium enterprises (SMEs) are considered as engines of economic growth and better absorbents of economic shocks compared to large enterprises. Seventy two percent of the non-agriculture labour force in Pakistan is employed by SMEs contributing 40% to GDP and 25% to exports. Chief Executive Officer (CEO) of Small Medium Enterprise Development Authority (SMEDA) while talking to BOL News highlighted access to finance, credit or equity as key issues faced by SMEs (SMEDA, 2022). Surgical instrument manufacturing industry in Sialkot has a special place in the industrial sector of Pakistan as it exports 80% - 90% of its production to over 150 countries around the world. The industry has been distinguished with prime specialization. It comprised of manufacturers, traders and exporters simultaneously. Other players include government agencies like customs, income tax department, banks, financial institutions, training and research facilities, suppliers of raw material (stainless steel) and machinery, accounting firms, advocates, couriers and clearing agents (SIMAP, 2021).
The official Gazetteer of Sialkot district highlighted the infancy years of the local industry in its 1920 issue. Sialkot earned its name as producer of high quality surgical instruments. M/s SS Uberoi & Sons and A.F. Ahmad & Co. were major producers of scissors and knives. In 1942, Metal Industries Development Centre (MIDC) was created during the World War – II with the embedded task of inspection and supply of medical instruments for the allied forces. It had a pivotal role in instilling technologies like drop forging hammers, vacuum heat treatment and numerically controlled die making machines (Ghani, 1996).
This study contributes to the existing body of literature by emphasizing reasons attributable to non-availability of finance to SMEs comprising surgical instruments manufacturers (SIM), cluster in Sialkot (Punjab), Pakistan.

Problem Statement

SMEs has a cardinal role to play in reviving, sustenance, and growth of a developing economy. Developed economies testifies the importance of SMEs' by considering them as foundation for their achievements in modern world. SMEs' in order to flourish need adequate funds along with support from government functionaries to grow. However, the report of SBP (2022) states that the total financing to SMEs in Pakistan is on a declining curve. The SMEs' finance as a percentage of domestic private sector financing reduced from 6.04% in Sep – 2021 to 5.75% in June – 2022, which further declined to 5.40% in Sep – 2022. That's why the research topic has been selected as a problem for a detailed study as: "Investigative Study on disparities in Small and Medium Enterprises (SMEs') financing pertaining to surgical instruments cluster."

Objective of the Study

The purpose of this study is to conduct case study analyses to explore the gaps in SMEs' financing pertaining to surgical instrument manufacturers cluster located at Sialkot, Punjab, Pakistan and underlying causes.

Review of Literature

New and small firms grow faster (Evans, 1987; Wagner, 1994; Cabral, 1995; Tether & Massini, 1998; Brixy & Kohaut, 1999), create more net jobs (Robson et al., 1993; Kirchhoff, 1994 and Hart et al., 1999; Morris & Brennan, 2000), distribute wealth effectively (Schumpeter, 1942), and innovate more than large firms (Edwards & Gordon, 1984; Chakrabarti, 1991). Pakistan's economy comprised of more than 5.2 million SMEs, employing more than 72% of non-agriculture labor force and 35% in value addition (SME Policy, 2021).

Pakistan did not inherit a strong industrial base at the time of partition. The course of industrialization has been moving around large scale manufacturing sector. Green revolution in 1960s gave birth to small scale industrial manufacturing sector in Punjab. Policies of Bhutto regime in 1970s believed to guide investments in small scale sector (Zaidi, 2005). On the recommendations of international donor agencies, initiatives like small business finance corporation (SBFC), youth investment promotion scheme (YIPS), and self-employment schemes (SES) were taken to advance small loans at reduced interest rates for the dis-advantaged sectors (Chaudahry, 2002). Currently, Khushhali bank, Meezan bank, Bank Al-Habib, First Women bank, Bank Alfalah, National Bank of Pakistan, Allied Bank, and SME bank have been assigned the task (SIMAP, 2021).

While discussing the makeup of small firm's financial structures, scholars have forwarded number of theories including but not limited to life cycle theory (Modigliani & Brumberg, 1954), personal construct theory (Kelly, 1955), financial intermediation theory (Gurley & Shaw, 1960), system perspective theory (Bertalanffy, 1968), agency theory (Jensen & Meckling, 1976), pecking order theory (Myers & Majluf, 1984), and social network theory (Castells, 1989). Nadvi (1999) forwarded the concept of social networks responsible for coexistence of competition, cooperation, and social capital in industrial clusters. The social identities pertinent to production ties in the SIM includes kinship, family, and localness. Parekh and Attuel-Mendès (2022) found multidisciplinary knowledge augmenting range of financing options, making them available for a larger sphere of society.

Rocha (2002) argued economies of labor supply to the local pool of specialized labor; economies of information & communication; economies of innovation & innovation diffusion attributing to technology spillovers – resulting from collective know how, experience, mutual relationships, trust and industrial environment shaped within the district owing to recurrent interaction between local actors.

Surgical Instruments cluster at Sialkot enjoy variant economies of scale including pooling of labor, technology spillovers and reduction of transport cots. Asian Development Bank (ADB) (2004) has also noted that the phenomenon of globalization gave birth to comparative advantage by combining markets.

SME Policy (2021) noted access to finance as one of major impediment in SMEs growth and development. A field survey involving more than 200 firms dispersed in eleven cities reveals dearth of formal and affordable financial services for SMEs. As a last resort, they opt for informal financial services like self-financing, or retained earnings. SBP (2021) has also reported 6.57% of total private sector financing disbursement to SMEs.

Numerous development models for SMEs have been proposed over years including the role of loan guarantee (Equinox, 2002; Green, 2003; Iichiro, Koji, & Yamashiro, 2006), government as passive partner (Cannon, 1998), government as catalyst, and the government as an active partner (Papadimitriou & Mourdoukoutas, 2002). Berger and Udell (1995) concludes that bank-borrower relationship dilutes the problems related to information asymmetry resulting in to lower interest rates and collateral requirements. Anshika and Singla

(2022) argued that the level of financial literacy of entrepreneurs, ease of doing business, training programs, and policies of lending institutions are the constraints to formal financing options available to SMEs'. Voordeckers and Steijvers (2006) also found decrease in collateral requirements with the length of bank-borrower relationship while studying the determinants of business collateral with personal collateral / commitments. Uchida, et.al. (2006) argued that banks tend to draw information from audited financial statements and soft information for underwriting loans using relationship lending. Financial and institutional developmental institutions lead to innovative lending technologies like factoring, leasing and credit scoring (Beck & Kunt, 2006; Kraemer & Lang, 2012). Ogunmokun et al. (2022) found statistically negative significant effect of lack of government role and banking reformations on lending of commercial banks to SMEs'.

Venture capital (VC) and business angels are considered as financing source for SMEs particularly for young innovative firms over the years. In recent years, entrepreneurial finance witnessed new players as diverse as family offices, corporate venture capital, social / debt venture funds, crowd (Debt, Donation, or Reward based), mini bonds, and angel networks. Crowdfunding is used by raising funds from different sources (Commercial lending by banks or VC) simultaneously (Block et al, 2018).

Research studies noted the impact of financing gaps on the financial structures of SMEs'. Mittal and Raman (2022) conducted an exploratory study and found influence of financing gaps on financing structures of micro small and medium enterprises (MSME) constraining formal sources of finance. Rao et al (2017) noted demand and supply side constraints for Indian SMEs' financing. Yesseleva (2010) observed that financial institutions offer expensive products and services to SMEs because of high interest rates, fees & charges, and switch over cost. Similar results are reported by Khan (2012) arguing that SMEs are considered risky and less credible compared to large enterprises. Researchers have argued that there is a gender bias in a small business credit market (Chaudhuri et al., 2020; Cicchiello, et al., 2022).

/No study is found exclusively discussing the underlying factors responsible for disparities in SMEs financing related to surgical Instruments cluster in Sialkot, Pakistan.

Research Methodology

In order to study the problem at hand under qualitative research paradigm, a case study is carried out in non-contrived settings. Questionnaire survey and in-depth interview data collection methods enable researcher to gather financial data as published source was not available. Non availability of SMEs population listings is a documented fact posing a steep challenge in conducting survey research (Cressy, 2006).

In qualitative research, the concept of validity akin to quality, rigor and trustworthiness (Golafshani, 2003). In-depth interviews ably administered achieved the objective of validity. To pass the test of reliability, thorough literature review was conducted citing the references and resources precisely. A Pilot study was conducted wherein an interview was conducted from one of the firm, and initial version of the questionnaire instrument was also tested by administering questionnaire among focus group of 5 firms. Their suggestions were incorporated into the final instrument before gathering information from informants comprising sample. The reliability score (Cronbach's alpha) for the survey questionnaire instrument was 0.860 and reliability score on standardized items was 0.880.

Data Collection

Conceptual framework of the study is designed on the basis of on-field, in-depth interviews. Open ended questions were posed to the interviewees followed by transcription and themes

identification with the use of NVivo Software. Transcriptions of the interviews led to the following themes:

Types of Financing: Respondents reported sources of finance desired by the firms in this sector. It includes equity (retained earnings & love money, new equity), short-term loan, long-term loan, other financing products like leasing etc., and institutional investments.

Terms & Conditions for Financing: Allegedly less favorable terms & conditions offered on the debt financing by the banks and financial institutions leads to disparity in financing for SMEs. Factors such as high interest rates, adequate collateral, availability of accounting & financial records, and business & marketing plan are considered significant.

*Rival Explanations***:** Regulatory functions of the government have a direct impact on the surgical industry including policies related to exports, imports, taxation, law & order, Judiciary, energy, and cost of doing business. Research & Development budgets impacts availability of quantum and types of finance for the firms.

Sample for Interviews

Purposive sampling technique was adopted as information was to be provided only by the firms manufacturing and exporting surgical instruments. The participants got selected through personal contacts under snowball sampling technique since prospective informants were reluctant to share information particularly financial information. The researcher managed to convince only 20 participants (physically placed in the geographical boundaries of Sialkot district) for interviews after consistent and tireless persuasion. These participants were contacted on phone and in person to fix the appointment. In-depth interviews were conducted, wherein open ended questions were asked.

Sample for Questionnaire Survey

There are three thousand nine hundred (3,900) members of association of surgical instruments manufacturers, suppliers, and exporters (SIMAP, 2021). Convenience sampling technique is administrated to find appropriate sample for the study. Sample of the study for administrating questionnaire survey comprised of one hundred ninety-seven (197) firms selected on the basis of their physical location in geographical limits of Sialkot district; and nature as manufacturers and exporter of surgical instruments. The response can be reckoned as good since 50.76% (100 filled questionnaires) of the firms answered the questions.

Questionnaire Survey

To test qualitative assumptions and findings, questionnaire survey can be used in the capital structure literature (Norton, 1991). While developing survey instrument, questionnaire employed by previous research investigating capital structures in corporate finance (Graham & Harvey, 2001), and studies in SMEs sector (Hogan, 2004) were consulted because these questions have already been tested cognitively. A self-administered questionnaire survey based on seven (07) points Likert scale was used to collect data. Reliability of instrument was checked by measuring Cronbach’s alpha.

Data Analysis

The Content analysis was conducted after transcriptions of interviews by coding information under relevant variables in NVivo computer software program. Reports were generated based on the word frequency, numbers of paragraph coded; percentage coverage of the data as per source, and data covered under themes. Chi Square goodness of fit test was also used.

Conceptual Framework of the Study

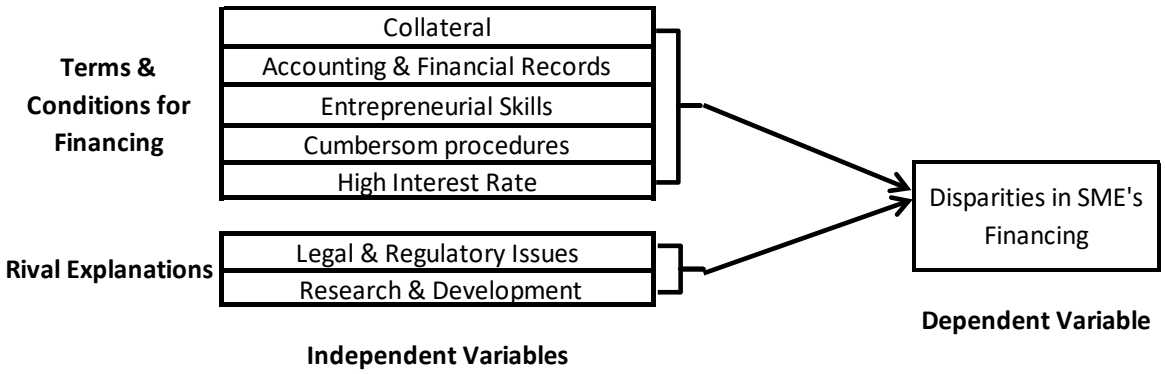

Figure 1: Conceptual Framework

Results & Discussions

The data coded under main themes designated as "Parent" and sub-themes as "stubs" depicting a simulation of perceived relationships based on the pilot study, is presented in a pictorial form shown as "Figure – I" below:

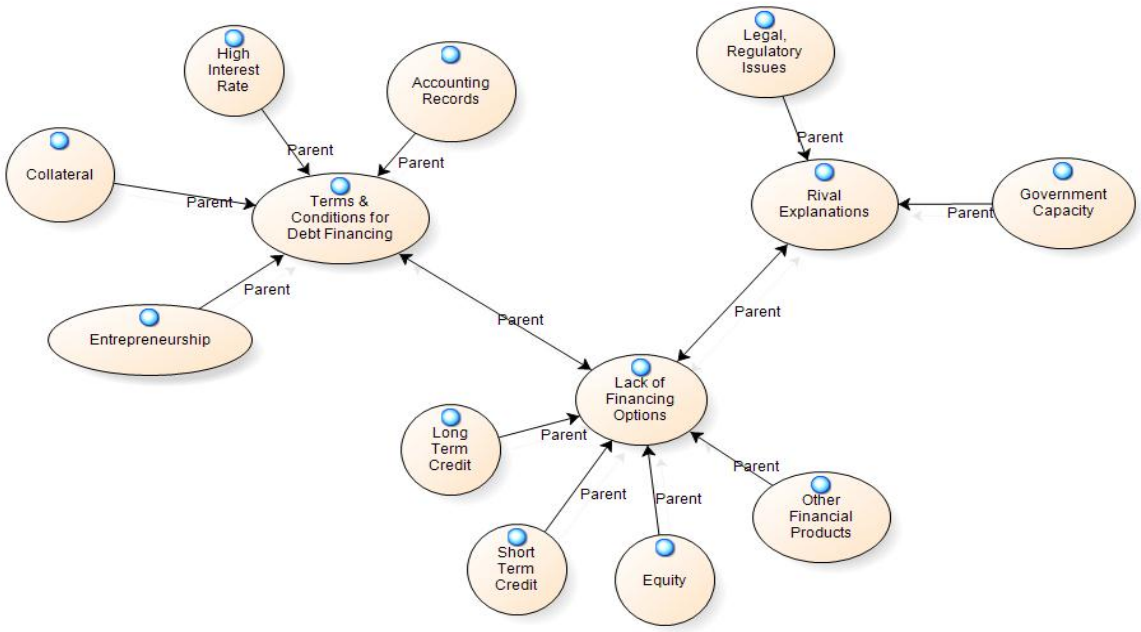

Figure 2

Interview data was coded under main themes as per pilot study, however, a new sub theme "Institutional investor" replaced "Other Financial Products". Following table reflects responses of informants in percentages.

Table # 01

Percentage (%) Coverage of Data under Themes & Sub-Themes											
Informants	**Financing Options**				**Terms & Conditions for Financing**					**Rival Explanations**	
	Equity	**Short Term Finance**	**Long Term Finance**	**Institutional Investors**	**Collateral**	**Entrepreneurial Skills**	**Accounting & Financial Records**	**Cumbersome Procedures**	**High Interest Rate**	**Research & Development**	**Legal & Regulatory Issues**
A	1.61	3.1	3.24	5.25	1.93	4.89	1.53	4.10	4.62	5.3	1.27
B	5.43	3.22	3.68	2.93	5.74	4.15	3.92	1.65	0.79	2.73	2.13
C	5.49	2.54	2.05	5.95	0.97	3.91	5.23	8.35	7.13	3.51	4.9
D	7.46	1.93	1.76	4.36	1.93	6.88	1.53	5.15	6.34	4.44	4.27
E	8.23	2.54	4.21	4.7	2.2	5.62	3.05	1.06	1.19	1.09	1.46
F	7.34	4.01	8.87	7.43	3.11	6.84	16.99	12.90	14.8	14.34	10.57
G	5.31	3.84	2.71	3.08	0.97	5.01	4.14	3.98	4.1	3.04	2.39
H	8.53	3.33	4.24	5.47	4.29	6.47	4.58	6.85	6.74	1.25	1.97
I	9.73	3.7	4.08	6.06	2.47	7.94	3.92	8.75	8.98	12.7	5.09
J	1.73	3.68	3.84	5.55	2.47	3.71	1.53	1.25	1.19	3.59	3.41
K	7.76	7.23	8.07	6.37	8.91	2.65	5.66	5.36	5.28	3.35	4.78
L	5.43	4.24	3.62	5.67	1.34	2.32	4.36	1.18	1.19	5.3	5.64
M	4.24	4.68	4.17	4.5	3.06	7.33	9.15	11.51	11.1	6.0	8.5
N	3.88	3.01	1.9	7.03	2.36	3.46	5.88	1.48	1.32	4.29	2.99
O	5.01	3.2	1.81	2.86	9.29	2.48	1.96	3.32	3.17	2.81	3.82
P	2.86	4.33	4.57	5.82	6.55	6.56	1.53	2.74	2.25	5.46	5.73
Q	0	17.88	14.27	3.19	15.46	2.93	8.5	11.01	12.02	6.39	4.46
R	3.76	4.66	3.68	3.83	3.6	5.58	5.01	1.52	1.32	10.13	8.53
S	4.53	4.22	4.08	3.59	7.09	5.33	3.05	5.74	5.15	4.29	3.69
T	1.67	14.68	15.16	6.37	16.26	5.94	8.5	2.10	1.32	0	14.39
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Retained earnings & love money (equity) are regarded as the foremost financing requirements evidenced by 65% of the informants and represents 84.49 % of all the interviewees' response. Responding to requirement of short term finance, nearly 45% of the respondents explicitly confirms its immense demand. Half of the informants' response comprising 71.72% of total replies considered long term finance as a primary source for capital expenditures. Information Asymmetry is considered as biggest constraint in the availability of difference financial sources to the SMEs' of this cluster. Seventy percent of interviewees echo 80.53% of the total response, expressing absence of institutional investors in the industry.

While forwarding their word on terms & conditions attached with financing offered by financial institutions responsible for disparities in SMEs' financing, interviewees representing 65% shared demand of tangible assets as collateral through 73.59% response; 78.54% replies by 65% respondents pointed lack of entrepreneurial skills; 81.92% response of 60%

informants was about absence of accounting & financial records; cumbersome procedure by 60% of participants through 81.43% of their response; high interest rates conveyed by 55% answerers reflected in 86.26% of answers; lack of R&D expenditures stated vide 72.64% replies by 50% informants; and legal & regulatory issues endorsed by 76.86% response expressed by 55% of respondents.

Result of the survey questionnaire populated against each and every variable under individual scale is illustrated in percentages (%) in Table # 02 below:

Table # 02

Sr. No.	Type of Variables	Names of Variables	Strongly Disagree	Disagree	Disagree Somewhat	Un--decided	Agree Somewhat	Agree	Strongly Agree	Total (%)
1	Independent Variables	Cumbersome procedures	4.0	53.1	8.5	10.4	9.4	8.3	6.3	100
2		Accounting & Financial Records	-	92.8	2.1	-	1	3.1	1	100
3		Collateral	-	5.3	10.4	13.5	36.5	26	8.3	100
4		Entrepreneurial Skills	1	80.3	3.1	-	7.3	7.3	1	100
5		High Interest Rates	-	8.3	4.2	4.2	25	50	8.3	100
6		Legal & Regulatory Issues	-	70.8	10.4	12.5	2.2	3.1	1	100
7		Research & Development	-	98	1	1	-	-	-	100
8	Dependent Variable	SMEs Financing Availability	-	7.3	60.4	30.2	2.1	-	-	100

Approximately 65.6% the respondents disagree on a scale (strongly disagree, disagree, disagree somewhat) with the statements posed under “Cumbersome Procedures” that, “SMEs being offered flexible terms on loan applications; Age & firm size do not affect financing terms; Procedures of financial institutions are not reckoned as cumbersome”. Nearly 92.8% of the repliers disagreed (strongly disagree, disagree, disagree somewhat) with the statements asked under “Accounting & Financial Records” that, “No books of accounts and financial statements are required by the financial institutions; SMEs hire full time finance / accounts manager”. Almost 70.8% of responses agreed (strongly agree, agree, agree somewhat) to the statements put forwarded in the questionnaire under “Collateral” that includes, “Banks do not offer any loan except collateral; collateral is required in the shape of property, building, personal assets and land; personal guarantee of government officer is also accepted”. Roughly 84.4% disagreed (strongly disagree, disagree, disagree somewhat) with the statements under “Entrepreneurial skills” that, “Lack of business plan is a reason for loan application rejection; and there is lack of entrepreneurship”. Around 85.42% of the informants agreed (strongly agree, agree, agree somewhat) that “Financial Institutions offer high interest rates to the SMEs”.

Chi-Square goodness of fit test was conducted and test statistic for the variables along with p – values against critical value of 0.05 are depicted in Table # 3 below:

Table # 3

	Chi-Square Test Statistics				
Sr. #		**Name of Variables**	**Chi-Square Value**	**df**	**Asymp. Sig.**
1	**Independent variables**	Cumbersome procedures	121.729a	6	0.000
2		Legal & Regulatory Issues	129.125b	5	0.000
3		Accounting & Financial Records	317.333e	4	0.000
4		Collateral	42.000b	5	0.000
5		Entrepreneurial Skills	281.375b	5	0.000
6		Research & Development	180.188d	2	0.000
7		Higher Interest Rates	94.000b	5	0.000
8	**Dependent Variable**	SMEs Financing Availability	81.417f	3	0.000
	a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 13.7.				
	b. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 16.0.				
	e. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 19.2.				
	d. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 32.0.				
	f. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 24.0.				

Since p values for all the variables are less than .05, we can reject the null hypothesis and conclude that there is a statistically significant relationship between the dependent and independent variables.

Conclusion

Results of the study corresponds with the pecking order theory as savings and retained earnings are reported as first; short-term finance as second; long term finance as third; and new equity investments as last preference for raising funds for SMEs' belonging to surgical instruments manufacturing cluster. Findings also support the presence of Informal lending (Business Angles; Love Capital) in this sector. Preference of debt over new equity express the respondents' goal to maximize profits and sales rather than value maximization, and to retain managerial control. Results further established that cumbersome procedures, legal & regulatory issues, accounting & financial records, collateral, entrepreneurial skills, research & development and high interest rates have a direct relationship with disparities in SMEs financing.

Policy Implications

The findings of this case study are useful for the policy makers of the federal and provincial governments in drafting future plans, budgets and policy documents in order to safe guard the interests of SMEs' of this cluster. Similarly, banks and commercial financial institutions may proactively realize the disparities in SMEs' financing and move swiftly to intervene and address the problem by drawing such lending schemes based on the findings of this study that can reduce the evident disparities in SMEs' financing pertaining to surgical instruments cluster.

Future Recommendations

Research methodology employed in this study can be extended in future research involving longitudinal data of firms across all ages, and sectors to examine changes in capital structure during firm's life cycle influenced by macroeconomic data such as changes in exchange rate, interest rates, and GDP.

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