



Research Paper

Institutional Finance, Working Capital Constraints, and Financial Performance of Small and Medium Enterprises: A Comparative Study of Karimnagar and Warangal Districts, Telangana

Merugu Kumara Swamy

PhD Research Scholar
Dept of Economics, Kakatiya University.

Prof.K. Padmalatha

PhD Research Supervisor
Dept of Economics, Kakatiya University

Abstract

The small and medium enterprises does not ensure adequate operating liquidity despite access to institutional credit. This study focuses on the first issue of financing sources, perception of financial adequacy, working-capital shortage and reported financial performance of 240 rice-milling and poultry enterprises selected from Karimnagar and Warangal districts of Telangana (120 enterprises of each district; 120 of each activity). Half of Karimnagar enterprises and more than one-third of Warangal enterprises reported that they did not have adequate finance. 50% Karimnagar enterprises and 39.2% Warangal Enterprises. Liquidity shortages were frequent 36.7% and 38.3%. The differences between districts in terms of adequacy ($U = 6229$, unadjusted $p = .064$) and instances of shortage ($U = 6930$, unadjusted $p = .608$) were not significant, nor were either one of them which survived the Holm adjustment. Of the marketers, 58.3% reported upsurge in turnover while 52.1% moved to a lower turnover category over the two years – a measurement mismatch that calls for verification.

Keywords: institutional finance, working capital, SMEs, liquidity constraints, profitability, Telangana, rice milling, poultry farming

I. Introduction

The consequences that occur because of imperfect financial intermediation can be studied through small and medium enterprises. They work with thinner cash buffers than larger companies, concentrated supplier and customer relationships, and limited collateral. Their financial information is often less standardized than that of larger companies. Many times a firm may have a commercially viable order or demand which is reliable and seasonal. However, payments for inventories and wages, utilities, and transportation may happen to precede receipts from customers. Thus, access to finance or adequacy of sanctioned funds or continuity of operating liquidity has distinct dimensions of financial inclusion. It is critical to separate the production and input needs of agro-processing companies whose production and procurement and market cycles are biological (Berger & Udell, 1998; Peterson & Rajan, 1994).

The relationship between financial constraints and investment decisions is not a new one. When there is unequal information, lenders may limit the amount of credit extended rather than merely raising loan prices. As a result, firms with very profitable investment opportunities may be constrained in their external finance (Stiglitz & Weiss, 1981). According to Berger and Udell, 1998, Sources of finance will vary with age, size and information transparency of the enterprise. Cross-country empirical studies have shown that smaller firms tend to face more severe financing obstacles. Moreover, financial development can favour activities dependent on small firms disproportionately (see Becker et al., 2005 and Becker et al., 2008). You should only interpret national evidence and large-sample international relationships as causal effects in two selected districts if...

The local institutional environment in Telangana is a relevant context because rice milling and poultry farming involve recurrent purchases of relatively costly biological or agricultural inputs. Rice mills should coordinate their buying of paddy, processing charges, storage and selling receipts and poultry operations are stricken with buying feed, flock cycles, animal health expense and prices. Businesses of this sort can demonstrate significant sales and a positive accounting profit despite brief cash shortages. Thus, a focus on annual turnover may mask the liquidity vulnerability of a going concern. According to prior research on working-capital, longer days receivable and longer inventory days associate with profitability. There is also

evidence for an optimal rather than a universally minimal working-capital position (Deloof, 2003; García-Teruel & Martínez-Solano, 2007; Baños-Caballero et al., 2014).

The article builds on the specific perspective using a questionnaire dataset at the district level instead of replacing it with a hypothetical balance sheet indicator. The key aim of the paper, which is what differentiates it from various papers which do similar type of analysis, is to empirically distinguish between the following: applying for a loan is different from getting one, getting some finance is different from getting adequate funds, and getting adequate funds at one point of time is different from never running short. The extent of the reported nonparametric significance tests supporting the descriptive district contrasts is also examined. A second contribution is method transparency regarding the incompatibility of self-reported change categories and paired turnover-band movements. Reporting this inconsistency is relevant to avoid attributing a growth effect to financial access.

Four major research questions will guide the paper: What are the financing channels used? How often the enterprises approach institutional lenders? How do companies evaluate their financing adequacy and frequency of working capital shortages? Are these reported conditions different in Karimnagar and Warangal or rice milling and poultry farming? What may we rightly conclude from available turnover and profit distributions? The analysis is exploratory; it does not imply that the causation runs from borrowing to growth.

II. Literature Review and Conceptual Framework

Credit rationing, information asymmetry, and financing hierarchies

Stiglitz and Weiss (1981) show that adverse selection and moral hazard can create credit rationing in equilibrium. This agent will observe that an increase in lending rates will change the risk-fortune and incentive structures of prospective borrowers. Thus, in equilibrium, the market does not clear at price alone. Myers and Majluf (1984) put linked the asymmetric information to financing preferences, in which internal funds prefer more than externally issued claims. Fazzari et al. (1988) subsequently noted how investment is sensitive to internal cash flow when external capital is not a perfect substitute. The above mechanisms are particularly likely for entities that do not have audited accounts and the collateral valuations are uncertain or cannot reliably demonstrate seasonal borrowing needs. Nonetheless, a survey report stating that credit is inadequate does not isolate by itself, whether collateral, interest rates, lending procedures or demand-side choices are responsible.

Berger and Udell's (1998) growth cycle perspective situates firm finance in the interplay of transparency, size and lender technologies. Relationship-based lending may assist lenders in acquiring valuable information about borrowers. According to Petersen and Rajan (1994), the tight relationship with the creditor can lead to better access to credit. Meanwhile, the benefits in the pricing of the loan are more limited. In the context of developing settings, the combination of collaborative lenders, commercial banks along with self-financing and family funds reflects a mixture of formal intermediation and informal risk-sharing arrangements.

A preference for one channel over another should not be interpreted as a lower cost channel absent data on rates, collateral, and terms.

Small-enterprise financial constraints and economic performance

Data on small-firm operations provides some backing and some caveats for a finance story. According to Beck et al. (2005), small firms are disproportionately exposed to financing and legal obstacles. Beck and Demirgüç-Kunt (2006) examined the constraints to growth on access to finance and Beck et al. (2008) find that effects on the sectoral growth consistent with the relaxing of financial constraints on small firms. In a cross-country study of the comparative analysis of the SME sector and economic development, Beck et al. (2005) warned that while positive correlations exist between national growth and prevalence of SMEs, it does not prove that they have a causal independent contribution. The difference between correlation, institutional selection and treatment effect is applicable at district level.

Working-capital mechanisms and potential nonlinearity

A firm's working capital is its investment in current operating assets less spontaneous or short-term operating financing. The cash conversion cycle for a business having accounts receivables, inventories and accounts payable can be written as $CCC = DIO + DSO - DPO$, where DIO, DSO and DPO are days inventory outstanding, sales outstanding and payables outstanding, respectively. A long cycle will usually call for larger funds to sustain a production scale. However, an excessively low inventory or serious delays to suppliers will interrupt output. Deloof's (2003) study exhibited relations on working-capital and profitability of Belgian firms. García-Teruel and Martínez-Solano (2007) provided relevant evidence for Spanish SMEs. These studies used continuous accounting data that the present survey does not have.

III. Method

Design, study population, and sampling

In the paper presented in analysis which was prepared demanding a thesis about a selected small and medium enterprises in Karimnagar and Warangal district. The most recent chapter on available finance covers 240 enterprises, equally distributed among districts (n=120 in each) and primary activities (n=120 rice mills; n=120 poultry farms) The introductory methods chapter describes purposive and stratified selection; this is treated as a non-random purposively selected stratified sample rather than a known-probability random sample. The specific districts were picked for this study. Therefore, the observations should never be interpreted as representative of MSMEs in Telangana. The dates of fieldwork, sampling frame, response rate or registered analysis protocol were not supplied.

Statistical analysis and reporting decisions

Counts and percentages summarize categorical distributions. Mann-Whitney U statistics from Chapter IV assigned for cross-group compare. In addition, unadjusted and Holm-adjusted p values as originally reported. Because the authors did not provide the original case-level data, we did not re-calculate significance statistics or effect sizes, nor did we fit a new multivariable model. The source analysis applies Holm adjustments over a broader exploratory comparison family, which may be conservative for the focused questions of this paper; both versions of p are therefore shown transparently. A five-point ordinal answer does not warrant an arithmetic interpretation of the distance between adjacent categories, nor can the monetary bands be viewed as interchangeable with exact turnover or profit. Open-ended upper bands make the midpoints very dangerous.

IV. Results

Finance sourcing and demand for institutional funds

The mix reveals an interesting, though largely institution-linked pattern. Cooperative banks contributed to the establishment of 60 enterprises (25.0%). Own savings contributed 50 enterprises (20.8%). Commercial banks have contributed to 40 enterprises (16.7%). Family or friends have contributed to 40 enterprises (16.7%). Government-assisted loans contributed to 30 enterprises (12.5%). An additional twenty responses (8.3%) are classified as an unresolved finance-source code. Out of 240 total enterprises, the three stipulated institutional categories amount to 130 enterprises (54.2%). Only 90 (37.5%) enterprises are supported by savings or family and friends. While this distribution designates a primary recorded source, it does not establish any exclusive reliance or indicate the percent obtained from each source.

In total, 190 of 240 enterprises (79.2%) had an application for institutional finance; 50 (20.8%) hadn't. The incidence of application was 76.7% in karimnagar (92/120) and 81.7% in Warangal (98/120). There was a five-percentage point descriptive gap. Rice mills and poultry enterprises underwent assessment by their relevance in lists namely LMOs. Such similarity suggests extensive interaction with formal institutions although this should not be interpreted as the probability of approval, fund receipt or borrowing success.

Financing source	n	%
Own savings	50	20.8
Family/friends	40	16.7
Commercial bank	40	16.7
Cooperative bank	60	25.0
Government-assisted loan	30	12.5
Unresolved code 7	20	8.3
Total	240	100.0

Source: Primary data

Financial adequacy and operational liquidity

The perceived adequacy is much less positive than the application rate suggests. Seventy-one respondents (29.6%) indicated completely inadequate funding and 36 (15.0%) mostly inadequate funding: a total of 107 enterprises (44.6%). The remaining participants indicated the proportion of adequacy as moderately adequate (53; 22.1%), mostly adequate (44; 18.3%) and completely adequate (36; 15.0%). One-third (33.3%) therefore placed financing in the two clearly positive categories. An enterprise may be liquidity constrained even after applying for an institutional loan if the requested amount gets cut down, if the loan comes in late, if the payment schedule is poorly matched, or if the firm needs a revolving facility and not a term loan; these are interpretation possibilities, not mechanisms measured directly in this dataset.

Thirty-one firms (12.92 percent) experienced factors affecting working capital management very often, but 180 (75.001 percent) did not experience them at all. 20 firms (8.3 percent) experienced them sometimes. Ninety respondents (37.5%) said shortages were frequent while 150 (62.5%) said they happened at least

sometimes. A critical difference: we cannot assume without a respondent-level cross-tab (i) the same enterprises are identified by the 44.6% inadequate-finance and (ii) 37.5% frequent-shortage measures.

Measure	Category	n	%
Funding adequacy	Completely/mostly inadequate	107	44.6
Funding adequacy	Moderately adequate	53	22.1
Funding adequacy	Mostly/completely adequate	80	33.3
Working-capital shortage	Never or rarely	90	37.5
Working-capital shortage	Sometimes	60	25.0
Working-capital shortage	Often or very often	90	37.5

Source: Primary data

Karimnagar–Warangal differences

The combined percentage of insufficient financing in Karimnagar is higher with 60 of 120 respondents 50.0% against 47 of 120 39.2% Warangal. On the other hand, for Karimnagar, the mostly/completely adequate share is 26.7%, and for Warangal, it is 40.0%. The exploratory rank comparison does not prove a difference at the conventional level ($U=6229$, raw $p = .064$; Holm $p = .642$) The frequencies create a possible meaningful directional pattern for consideration for future research but do not support the claim that the two districts differ.

Of all the firms flagged as facing working-capital shortages ‘often’ or ‘very often,’ Karimnagar has 44 (36.7%) and Warangal has 46 (38.3%). The U test for correlation test was $U = 6930$, raw $p = 0.608$, Holm $p = 1.000$. The close frequencies suggest that operational liquidity risk exists in both places, but a non-significant test cannot prove the same. Differences in districts can also be distorted by the scale of companies, a turnover capital intensity, lending relationship, or anything else omitted from an adjusted model.

A similar image is provided by activity comparisons. The rank comparison was $U = 6420$, raw $p = .137$, Holm $p = 1.000$, which showed that 55 rice mills (45.8%) and 52 poultry enterprises (43.3%) were recorded as inadequate finance. There were regular shortages reported by 47 rice mills (39.2%) and 43 poultry units (35.8%), $U 7345$, raw $p .784$, Holm $p 1.000$. The exploratory nature of these tests suggests that they should instead be treated as insufficient evidence for an activity difference and not proof that working-capital needs are the same.

Comparison outcome /	Group 1	Group 2	U	Raw p	Holm p
Adequacy: district	Karimnagar 50.0% inadequate	Warangal 39.2%	6229	.064	.642
Shortage: district	Karimnagar 36.7% frequent	Warangal 38.3%	6930	.608	1.000
Adequacy: activity	Rice mills 45.8% inadequate	Poultry 43.3%	6420	.137	1.000
Shortage: activity	Rice mills 39.2% frequent	Poultry 35.8%	7345	.784	1.000

Source: Primary data

Performance distributions and inconsistency in turnover reporting

Response of net-profit is grouped instead of reporting in rupees for each firm. A total of 20 enterprises were classified as break-even/zero-profit/below; 50 enterprises reported positive profits of below ₹5 lakh; 40 enterprises reported profits of ₹5 lakh to below ₹10 lakh; 60 enterprises reported profits of ₹10 lakh to below ₹25 lakh; 40 enterprises reported profits of ₹25 lakh to below ₹50 lakh; and 30 enterprises reported profits of at least ₹50 lakh. The category structure creates variation in absolute net profit but does not support making estimates for return on assets, profit margins or turnover-adjusted profitability. Statistical analysis indicated that the net-profit distribution did not differ significantly across districts ($U = 7090$, raw $p = .836$, Holm $p = 1.000$).

The turnover change measure which we received gives a positive picture. 90 enterprises (37.5%) reported substantial growth, 50 (20.8%) slight growth, 40 (16.7%) no change and 60 (25.0%) decline.

Nonetheless, the partnered annual-band table lays out that 125 firms (52.1%) are in a decay mode, with 61 (25.4%) in upswing and 54 (22.5%) in a constant state.

Among the 125 downward movers, 69 still recorded growth in turnover, 24 no change and 32 decline. The difference is substantial enough not to be mere rounding and so the embargo can be an unambiguous claim that performance improved/deteriorated for the same firms.

There may be various reasons for this, none of which have been established. For example, turnover responses may be referencing a different baseline or time period; income-band codes are mapped inconsistently; or there may be reporting and data-entry errors. Additionally, a band transition measure is not observed when moving in a wide interval, viz., from ₹1 crore to below ₹5 crore. The annual bands for 2024–25 and 2025–26 differ at the lower end and thus further support code harmonisation. The proper outcome is a disclosed measurement misalignment and a recommendation to audit case-level responses prior to using the turnover transitions as an inferential conclusion.

V. Conclusion

The survey was conducted with a sample of 240 rice-milling and poultry enterprises located in Karimnagar and Warangal districts. It was observed that these enterprises did apply for institutional finance. However, what was notable was the problems of perceived inadequacy of funds. Overall, the enterprises kept facing problem of shortage of working capital on a recurring basis. Cooperative banking was the single largest recognized finance source. In Karimnagar, inadequacy was relatively more common; frequent shortages were similarly common across the districts. None of the reported district/activity rank comparisons of these two indicators attained conventional significance. Categories of turnovers and profits show significant heterogeneity but do not denote credit-driven performance improvements. Most importantly, conflicting turnover-and-change indicators need source-data reconciliation to strengthen growth conclusions. This evidence suggests that moving to a measure of adequacy, timeliness, liquidity stability and enterprise-specific cash requirements is more appropriate than a measure of institutional credit participation alone. Institutional financing is claimed to enhance SME financial outcomes. To make that claim credible, better measurements and longitudinal evidence are needed.

References

- [1]. Afrifa, G. A. (2016). Net working capital, cash flow and performance of UK SMEs. *Review of Accounting and Finance*, 15(1), 21–44. <https://doi.org/10.1108/RAF-02-2015-0031>
- [2]. Aktas, N., Croci, E., & Petmezas, D. (2015). Is working capital management value-enhancing? Evidence from firm performance and investments. *Journal of Corporate Finance*, 30, 98–113. <https://doi.org/10.1016/j.jcorpfin.2014.12.008>
- [3]. Ayyagari, M., Demirgüç-Kunt, A., & Maksimovic, V. (2008). How important are financing constraints? The role of finance in the business environment. *The World Bank Economic Review*, 22(3), 483–516.
- [4]. Baños-Caballero, S., García-Teruel, P. J., & Martínez-Solano, P. (2012). How does working capital management affect the profitability of Spanish SMEs? *Small Business Economics*, 39(2), 517–529. <https://doi.org/10.1007/s11187-011-9317-8>
- [5]. Baños-Caballero, S., García-Teruel, P. J., & Martínez-Solano, P. (2014). Working capital management, corporate performance, and financial constraints. *Journal of Business Research*, 67(3), 332–338. <https://doi.org/10.1016/j.jbusres.2013.01.016>
- [6]. Beck, T., & Demirgüç-Kunt, A. (2006). Small and medium-size enterprises: Access to finance as a growth constraint. *Journal of Banking & Finance*, 30(11), 2931–2943.
- [7]. Beck, T., Demirgüç-Kunt, A., Laeven, L., & Levine, R. (2008). Finance, firm size, and growth. *Journal of Money, Credit and Banking*, 40(7), 1379–1405. <https://doi.org/10.1111/j.1538-4616.2008.00164.x>
- [8]. Beck, T., Demirgüç-Kunt, A., & Levine, R. (2005). SMEs, growth, and poverty: Cross-country evidence. *Journal of Economic Growth*, 10(3), 199–229. <https://doi.org/10.1007/s10887-005-3533-5>
- [9]. Beck, T., Demirgüç-Kunt, A., & Maksimovic, V. (2005). Financial and legal constraints to growth: Does firm size matter? *The Journal of Finance*, 60(1), 137–177. <https://doi.org/10.1111/j.1540-6261.2005.00727.x>
- [10]. Berger, A. N., & Udell, G. F. (1995). Relationship lending and lines of credit in small firm finance. *The Journal of Business*, 68(3), 351–381.
- [11]. Berger, A. N., & Udell, G. F. (1998). The economics of small business finance: The roles of private equity and debt markets in the financial growth cycle. *Journal of Banking & Finance*, 22(6–8), 613–673. [https://doi.org/10.1016/S0378-4266\(98\)00038-7](https://doi.org/10.1016/S0378-4266(98)00038-7)
- [12]. Carpenter, R. E., & Petersen, B. C. (2002). Is the growth of small firms constrained by internal finance? *Review of Economics and Statistics*, 84(2), 298–309.
- [13]. Cole, R. A. (1998). The importance of relationships to the availability of credit. *Journal of Banking & Finance*, 22(6–8), 959–977.
- [14]. Deloof, M. (2003). Does working capital management affect profitability of Belgian firms? *Journal of Business Finance & Accounting*, 30(3–4), 573–588. <https://doi.org/10.1111/1468-5957.00008>
- [15]. Demirgüç-Kunt, A., & Maksimovic, V. (1998). Law, finance, and firm growth. *The Journal of Finance*, 53(6), 2107–2137.
- [16]. Fazzari, S. M., Hubbard, R. G., & Petersen, B. C. (1988). Financing constraints and corporate investment. *Brookings Papers on Economic Activity*, 1988(1), 141–206.
- [17]. García-Teruel, P. J., & Martínez-Solano, P. (2007). Effects of working capital management on SME profitability. *International Journal of Managerial Finance*, 3(2), 164–177.
- [18]. Holm, S. (1979). A simple sequentially rejective multiple test procedure. *Scandinavian Journal of Statistics*, 6(2), 65–70.
- [19]. Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305–360.
- [20]. Kaplan, S. N., & Zingales, L. (1997). Do investment-cash flow sensitivities provide useful measures of financing constraints? *The Quarterly Journal of Economics*, 112(1), 169–215.
- [21]. La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. W. (1998). Law and finance. *Journal of Political Economy*, 106(6), 1113–1155.
- [22]. Modigliani, F., & Miller, M. H. (1958). The cost of capital, corporation finance and the theory of investment. *American Economic Review*, 48(3), 261–297.
- [23]. Myers, S. C. (1984). The capital structure puzzle. *The Journal of Finance*, 39(3), 575–592.
- [24]. Myers, S. C., & Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics*, 13(2), 187–221.
- [25]. Petersen, M. A., & Rajan, R. G. (1994). The benefits of lending relationships: Evidence from small business data. *The Journal of Finance*, 49(1), 3–37. <https://doi.org/10.1111/j.1540-6261.1994.tb04418.x>
- [26]. Petersen, M. A., & Rajan, R. G. (1997). Trade credit: Theories and evidence. *Review of Financial Studies*, 10(3), 661–691.
- [27]. Rajan, R. G. (1992). Insiders and outsiders: The choice between informed and arm’s-length debt. *The Journal of Finance*, 47(4), 1367–1400.
- [28]. Rajan, R. G., & Zingales, L. (1998). Financial dependence and growth. *American Economic Review*, 88(3), 559–586.
- [29]. Shin, H.-H., & Soenen, L. (1998). Efficiency of working capital management and corporate profitability. *Financial Practice and Education*, 8(2), 37–45.
- [30]. Stiglitz, J. E., & Weiss, A. (1981). Credit rationing in markets with imperfect information. *American Economic Review*, 71(3), 393–410.

- [31]. Whited, T. M. (1992). Debt, liquidity constraints, and corporate investment: Evidence from panel data. *The Journal of Finance*, 47(4), 1425–1460.
- [32]. World Bank. (2017). Enterprise surveys: What businesses experience. <https://www.enterprisesurveys.org/>