

Information Gaps for Micro, Small and Medium Enterprises (MSMEs) and Potential Synergies with Multinational Corporations (MNCs): Road Map and Actionable Plans*

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In 2017 ACI was ranked 13th globally, 2nd in Asia and 1st in Singapore amongst 90 think-tanks world-wide under the “Best University Affiliated Think-Tank” category by Think-Tanks and Civil Societies Program at the University of Pennsylvania, USA

Presentation Outlines

- **Globalization and Its Discontents.**
- **Mitigating Discontents of Globalization**
- **Information Gaps for SMEs: Issues at stake**
- **Potential Evidence-Based Research Areas:
Interests of MNCs**
- **A SMEs' Productivity Tracking and Efficiency
Monitoring (PTEM) Index**

Globalization and Its Discontents

- The textbook case on benefits of international trade based on comparative economic advantage **overestimated** the efficiency of the market pricing mechanism and **underestimated** the inequitable efficacy of market forces.
- The fundamental flaws of the textbook case are due to **unrealistic assumption** on flexible labour market adjustment between manufacturing and services industries and the **inability to recognize** challenges from rapid technological progress to the workforce.
- As the economy goes through restructuring, inertia adjustment within the labour market and failure to cope with rapid skill obsolescence have resulted in **double mismatches** in terms of job-type created and relevant market skills required which in turn led to **worsening income disparity** and **rising structural unemployment** for both between and within developed and developing economies.
- Such unhappy outcomes, verified by empirical evidences in the US and beginning to be felt in China, have led to inward looking **rising protectionist sentiment** and **resistance to mobility of workers** which has resulted in uncertainty over further progress of globalization and greater regional integration.

Mitigating Discontents of globalization

- **Pursuing consistent economic growth** and employment creation remained the most sustainable way of overcoming income disparity where government should play a pivotal role in provision of efficient and affordable of public services including education, healthcare, housing and public transport.
- In order to build an **inclusive society**, rendering living environment liveable, ensuring affordable cost of living for ordinary residents, improving ease-of-doing business for SMEs very much hinged upon the effective role of the government and not leaving to market forces alone.
- Given the inflexible labour market adjustment and challenges from rapid technological change, resources needed for **economic restructuring and rebalancing** across sector ought to be considered sooner rather than later as part of the trade-oriented strategy where diversified development remained paramount.
- As sentiment is increasingly pessimistic towards multi-lateral and regional free-trade agreements, **trade and investment** would continue to prevail at least at bi-directional level, G to G initiatives for sub-national economic development, public-private participation in local infrastructure investment and project-specific engagements.⁴

Information Gaps for SMEs: Issues at stake

- Small and medium enterprises (SMEs) tend to account for more than half of the total employment in most economies, both developed or developing, and yet it typically contributed to only about one-third of the gross domestic product.
- Low productivity, inefficient management and lack of competitiveness for most SMEs are generally acknowledged, but firm-level data constraints have led to difficulty in undertaking systematic analysis.
- Non-level playing field from multi-national corporations (MNCs) exacerbated by adverse financial environment can restrain business innovation, capacity expansion and internationalization.
- Thus understanding strengths and weaknesses of SMEs across economies are paramount to formulate business strategies and evaluate synergies amongst companies at both macro and micro level.

Potential Evidence-Based Research Areas: Interests of MNCs

- In view of the intrinsic importance of firm-level competitiveness in terms of productivity, efficiency, governance and internationalization, the prime objective of the proposed research program is to develop a micro-based firm level competitiveness analysis In the context of globalisation, mobility of economic activities and blurring of borders.
- An evidence-based assessment of determinants and dynamics of firm-level competitiveness is paramount for building a solid foundation for policy makers to make adjustments and prepare their industries for an increasingly competitive regional economic landscape.
- There are a series of pertinent policy issues or implications which could be examined under the proposed evidence-base assessment of firms' behaviors and performances in the Asian CompNet

Potential Evidence-Based Research Areas

- Areas of policy-relevant research would include the impact of exchange rate devaluation to firm size, firm-level total factor productivity and export performances. Identify reasons between labor cost and productivity dynamics as well as nexus of profitability and productivity distribution amongst firms, and it is also critical to understand how is productivity related to credit constraints?
- It is paramount to verify vulnerability of productivity amongst export-oriented firms in face of macroeconomic shocks and firms' size class dynamics size in the period of crisis and recovery. It is most useful to understand possible impacts and determinants of capital and labor misallocation and factor reallocation. It is also interesting to understand key differences in ability to adopt or invent new technology amongst firms.
- It is most important to understand also the role of intra-industry and inter-industry global value chain integration for climbing up the income ladder as their impact differ in manufacturing versus services sectors.

A SMEs' Productivity Tracking and Efficiency Monitoring (PTEM) Index for Singapore

新加坡中小型企业生产率与监测效率指数

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Related Background 相关背景

- The economic literature has long recognised that it is paramount to not only look at macroeconomic factors to devise policies for improving an economy's competitiveness but also to examine the performances of local firms, particularly small- and medium-sized enterprises (SMEs), that underpin sectoral and, ultimately, national competitiveness.

经济文献认为，通过观察宏观经济因素来构建提升某个经济体竞争力的政策体系，和检验支撑部门及国家竞争力的当地企业，尤其是中小企业的业绩，均至关重要。

- In Singapore, the 180,000 local SMEs account for 99% of the enterprises and contribute nearly half of the GDP while employing 70% of the workforce.

新加坡 180,000 中小型企业占据全部企业的99%，而且贡献了近50%的GDP份额，同时雇佣了70%的劳动力。

- SMEs thus play a significant role in shaping the future economic development trajectory of Singapore and sustaining the country's competitiveness as global competition intensifies.

因此，在全球竞争不断强化之际，中小型企业指明新加坡未来经济发展方向以及维持国家竞争力方面起到了举足轻重的作用。

Related Background 相关背景

- Nonetheless, challenges abound for Singapore's SMEs to improve their productivity and efficiency.

然而，新加坡中小型企业 在提升生产率和效率方面面临挑战。

- Government-linked companies (GLCs) and multinational corporations (MNCs) employ the majority of high-quality labour force, rendering shortage of high-quality labour for SMEs.

政府相关公司和跨国公司雇佣了大多数高质量的劳动力，从而导致中小型企业高质量劳动力的短缺。

- Facing with a deficit of high-quality human capital, SMEs often fail to organise their production and operations in an efficient and systematic fashion, which results in low productivity.

面临高质量人力资本的短缺，中小型企业经常无法组织有效及系统的生产和运营，从而导致了生产率的低效。

- Consequently, Singapore's success with GLCs has not translated into indigenous growth and development of the SME sector.

结果，新加坡政府相关公司的成功并没有带来中小型企业部门的成长与发展。

Related Background 相关背景

- Singapore's SMEs are also caught in a vicious cycle of market failure:
新加坡中小型企业还面临市场失败的恶性循环之中：

➤ When the market is good, SMEs allocate the majority of their resources to production, rendering low investment in training of labour.

在市场环境良好的情况下，中小型企业把大部分的资源分配于生产，导致了劳动力培训的低投入。

➤ When the market is bad, SMEs lack funds to upgrade human capital.

在市场环境恶化的情况下，中小型企业缺乏资金来升级人力资本。

Related Background 相关背景

- The government therefore has to step in to correct such market failure through:
政府因此必须采取措施纠正这种市场失败：
 - (i) subsidising the costs of employee training (for instance, the SkillsFuture scheme), and
补贴员工培训的成本（例如：技能未来计划）
 - (ii) bridging the information gap in finding market niches and business partners, thereby mitigating the costs of acquiring information for SMEs and creating the necessary synergy for growth.
弥补在寻找市场缺口和商业伙伴方面的信息鸿沟，因此降低中小型企业获得信息的成本，并创造了必要的增长协同性
- In doing so, the government will open the door for SMEs to follow the footsteps of GLCs.
为此，政府要为中小型企业追赶政府相关公司打开方便之门。

Research Objectives 研究目标

- The objectives of Asia Competitiveness Institute (ACI)'s research project on **SMEs' Productivity Tracking and Efficiency Monitoring (PTEM) Index** are fivefold:

亚洲竞争力研究所中小型企业生产率与监测效率指数项目有以下五个研究目标:

(i) To facilitate the information acquisition process for SMEs,

简化中小型企业信息获得的程序,

(ii) To enable SMEs to identify their relative strengths and weaknesses through competitiveness rankings and simulation analysis,

通过竞争力排名和模拟分析使中小型企业认识到它们的相对优势与劣势,

(iii) With the results of the study, ACI will engage industry experts to provide customised consultation as to how SMEs can enhance their strengths and minimise their weaknesses,

利用这些研究成果, 亚洲竞争力研究所将与工业专家一起提供关于中小型企业如何提升优势、降低劣势的常规化咨询服务。

Research Objectives 研究目标

(iv) To assist the Workforce Development Agency (WDA) in designing training courses which are better suited to SMEs' needs,

帮助劳动力发展局设计更加符合中小型企业需求的培训课程，

(v) To conduct cross-country benchmarking and comparison with SMEs in other Asian economies,

为亚洲其他经济体的中小型企业设立跨国基准并进行比较研究。

SMEs' Productivity Tracking and Efficiency Monitoring (PTEM) Index

中小型企业生产率与监测效率指数

(1)

Financial and Business Statistics

金融与商业统计的实用指
标

(1.1)

Operating Business
Activities
经营活动

(1.2)

Financing and Investing
Activities
融资和投资活动

(2)

Human Capital, Manpower Investment and Productivity

人力资源投资与生产率

(2.1)

Human Resource
Conditions and Policies
人力资源情况与政策

(2.2)

Manpower Investment
人力资源投资

(2.3)

Productivity
生产率

(3)

Internationalisation, Marketing, Branding and Innovation

国际化, 营销, 品牌促销
与革新

(3.1)

Internationalisation
国际化

(3.2)

Marketing
营销

(3.3)

Branding
品牌促销

(3.4)

Innovation
革新

(4)

Corporate Governance, Management and Execution

公司治理, 管理与实行

(4.1)

Corporate Governance
公司治理

(4.2)

Management Policies
管理政策

(4.3)

Leadership and
Execution Power
领导与实行力

SMEs' PTEM Index: Theoretical Framework

中小型企业生产率与监测效率指数: 理论框架

I. Indicators for Financial and Business Statistics (19 Indicators)

金融与商业统计的实用指标 (19个)

I.1 Operating Business Activities 经营活动		I.2 Financing and Investing Activities 融资和投资活动	
1.1.01	Sales Turnover 营业额	1.2.01	Current Ratio 流动比率
1.1.02	Earnings before Taxes (EBT) 税前盈利	1.2.02	Debt to Asset Ratio 债务资产比率
1.1.03	Operating Profit 营业利润	1.2.03	Capital Intensity 资本密集度
1.1.04	Earnings before Interests, Taxes, Depreciation and Amortisation (EBITDA) 未计利息、税项、折旧及摊销前盈利	1.2.04	Investment/Retained Earnings Ratio 投资与留存收益比率
1.1.05	Annual Turnover Growth Rate 年营业额增长率	1.2.05	Free Cash Flow to Firm 自由现金流为公司
1.1.06	Annual Operating Profit Growth Rate 年营业利润增长率	1.2.06	Return on Asset 资产回报率
1.1.07	Profit Margin 利润率	1.2.07	Return on Equity 股本回报率
1.1.08	Accounts Receivable Turnover Ratio 应收账款周转率	1.2.08	Interest Coverage Ratio 利息保障倍数
1.1.09	Accounts Payable Turnover Ratio 应付账款周转率		
1.1.10	Sales per Dollar of Capital 每一元资本的销售		
1.1.11	Profit to Value-Added Ratio 利润增值率		

SMEs' PTEM Index: Theoretical Framework

中小型企业生产率与监测效率指数: 理论框架

2. Indicators for Human Capital, Manpower Investment and Productivity (21 Indicators)

人力资源投资与生产率的实用指标 (21个)

2.1 Human Resource Conditions and Policies 人力资源情况与政策		2.2 Manpower Investment 人力资源投资		2.3 Productivity 生产率	
2.1.01	Employees' Average Years of Formal Education 员工平均教育年限	2.2.01	Staff Turnover Rate 员工离职率	2.3.01	Annual Value-Added per Worker 全年每个工人增加值
2.1.02	Part-time Employees/Total Workforce 兼职员工总人力资源比重	2.2.02	Average Length of Employee Service 员工平均服务期	2.3.02	Annual Value-Added Growth 全年增值增长
2.1.03	Existence of HR Department 企业是否成立人事部?	2.2.03	Talent Recruitment and Retention Scheme 人才招聘与保留计划	2.3.03	Annual Turnover per Worker 人均年收入
2.1.04	Labour Dispute Cases 劳资纠纷案件	2.2.04	Career Development Plans 职业发展计划	2.3.04	Labour Cost per Employee 每名员工的劳动成本
2.1.05	Cases of Workplace Accidents 工伤事故案件	2.2.05	Manpower Investment/Total Expenditure 人力资源投资总支出比重	2.3.05	Labour Cost to Sales 劳动成本销售比率
2.1.06	Annual Performance Evaluation 年度绩效评估	2.2.06	Skills Upgrading Subsidies Received 获得技能提升补贴	2.3.06	Labour Cost Competitiveness 劳动成本竞争力
2.1.07	Employee Reward System 员工奖励制度			2.3.07	Annual Capital Productivity 全年资本生产率
				2.3.08	Total Factor Productivity 全要素生产率

SMEs' PTEM Index: Theoretical Framework

中小型企业生产率与监测效率指数:理论框架

3. Indicators for Internationalisation, Marketing, Branding and Innovation (17 Indicators)

国际化，营销，品牌促销与革新的实用指标（17个）

3.1 Internationalisation 国际化		3.2 Marketing 营销	
3.1.01	Overseas Revenue/Total Revenue 海外收入总收入比重	3.2.01	Marketing Team Size 企业营销团队的规模
3.1.02	Overseas Market Presence 海外市场存在	3.2.02	Marketing Expenditure/Total Expenditure 营销支出总支出比重
3.1.03	Targeted Overseas Market Presence 海外市场存在目标	3.2.03	Physical Marketing Channels 物质营销渠道
3.1.04	Overseas Investment by Firm 企业的海外投资	3.2.04	Online Marketing Channels 网络营销渠道
3.1.05	Overseas/Local Management Staff Ratio 海外与本地管 理层比率		
3.3 Branding 品牌促销		3.4 Innovation 革新	
3.3.01	Company Brand Value 企业品牌价值	3.4.01	R&D Expenditure/Total Expenditure 研发支出总支出比重
3.3.02	Branding Strategy 品牌战略	3.4.02	Staff Innovation Incentive 员工革新奖金
3.3.03	Brand Diversity 品牌多样性	3.4.03	Innovation Awards Received 获得的革新奖
3.3.04	Brand Positioning Statement 品牌定位陈述	3.4.04	Patents Granted 获得的专利

SMEs' PTEM Index: Theoretical Framework

中小型企业生产率与监测效率指数:理论框架

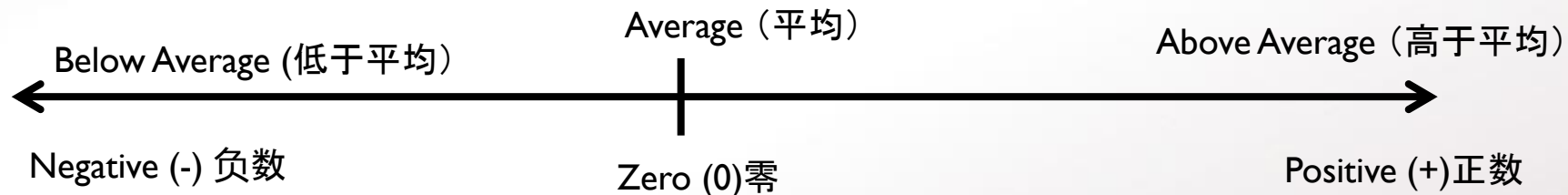
4. Indicators for Corporate Governance, Management and Execution (22 Indicators)

公司治理,管理与实行的实用指标 (22个)

4.1 Corporate Governance 公司治理		4.2 Management Policies 管理政策		4.3 Leadership and Execution Power 领导与实行力	
4.1.01	Illegal Activities Reported (Fraud, Theft, etc.) 据报导的非法活动 (诈骗, 偷窃)	4.2.01	Vision and Mission Statements 发展愿景和使命声明	4.3.01	Succession Planning 接班人计划
4.1.02	International Accounting and Audit Standards 国际会计, 审计准则	4.2.02	International Organisation for Standardisation (ISO) Certification 国际标准化组织认证	4.3.02	Average Length of Service of Management 管理层平均服务期
4.1.03	Presence of Code of Ethics 拥有道德规范	4.2.03	Flexible Working Arrangements 灵活的工作安排	4.3.03	Delegation of Authority 权力下放
4.1.04	Employers' Pledge of Fair Employment Practices 雇主公平就业的承诺	4.2.04	Annual Business Plan and Budget 年度业务计划和预算	4.3.04	Entrepreneurship Awards Received 获得的创业奖
4.1.05	Mechanism for Internal Dispute Settlement 内部争端解决机制	4.2.05	Existence of a Licensed Internal Auditor 拥有合格内部审计	4.3.05	Regular Management Meetings 定期的管理层会议
4.1.06	Whistle-blowing Policy 举报政策	4.2.06	Separation of Accountability of CEO and CFO 首席执行官与首席财务官问责制的分离	4.3.06	Attrition Rate for Poor Performers 表现不佳员工流失率
4.1.07	Filing of Financial Statements with ACRA 向会计与企业管制局提交财务报表	4.2.07	Presence of a Well-Defined Corporate Structure 拥有明确的公司架构	4.3.07	Setting KPIs for Performance Tracking 设定关键绩效指标来用于性能跟踪
4.1.08	Engagement of External Auditors 雇佣外部审计师				

Methodology – Standardised Score 方法论-标准值

$$\text{Standardised value (标准化值)} = \frac{\text{Original Value (原值)} - \text{Mean (平均值)}}{\text{Standard Deviation (标准偏差)}}$$



- A relative comparison of performance between one firm and the average firm 某个公司与处于平均水平的公司业绩的相关比较
- No unit of measurement required 不需要计量单位
- Equal weights for each environment 每个类别等权重

Methodology – ‘What-if’ Simulation 方法论-模拟分析

I. Sort the indicators (指标) for each firm

No	Indicator	Score
1	Indicator A	Highest for firm
2	Indicator B	Higher score
3	Indicator C	
4	Indicator D	
5	Indicator E	
...	...	
...	...	
...	...	
75	Indicator V	
76	Indicator W	
77	Indicator X	
78	Indicator Y	Lower score
79	Indicator Z	Lowest for firm

- Not a beauty contest 不是选美比赛
- Scores matter more than ranks 分数比排名重要
- See improvement in scores and ranks 在分数与排名中看到改进
- Even if ranks remain unchanged, scores do improve 即使排名无变化, 分数任然改进

2. Identify top 20% weakest indicators
确定20%最差的指标

3. Raise their scores to 0 (zero) if lower than zero
如果小于零, 将分数提高到零

4. Recalculate rankings with scores for other firms remaining constant
其他公司保持不变, 根据分数重新排名

Thank you!

谢谢!