

**OVERCOMING FINANCE CONSTRAINTS IN
MICRO AND SMALL ENTERPRISES:
LESSONS FROM NIGERIA'S OTIGBA ICT CLUSTER**

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OUTLINE

- **Introduction**

- Background to the Study
- Statement of the Problem
- Research Questions

- **Methodology**

- Conceptual Framework
- Research Scope
- Research Instruments and Subjects

- **Results and Discussion**

- Dynamics of Knowledge Acquisition and Diffusion in the Cluster
- Forms of Scaling-up Among the Micro Enterprises in The Cluster

- **Conclusion**

BACKGROUND TO THE STUDY

- Open Air Innovation Network study
- **Industrialization:** structural change and diversification of economy due to technological change and innovation
- Allows specialization, productivity gains and higher wages and change in employment and output structure
- Allows for diversification and growth of new sectors through economies of scale
- Productivity growth in entre economy as knowledge, technological capability & skilled employees diffuse

BACKGROUND TO THE STUDY

- **Entrepreneurs** key in the industrialization process as creative disruptors
- **Innovate:** Market, process, product/service, organisation, inputs(Schumpeter, 1942)
- SSA has more MSE than large firms & they innovate and employ as significant no
- The early SA entrepreneurs in diamond & gold mining: change in jobs & GDP from agriculture to mining
- State as entrepreneurs & role of IDC in creating entrepreneurs in SA in early 40s
- Entrepreneurship and **clustering** key for industrialization
- **Agglomeration:** knowledge sharing, innovation, learning, exports, growth, productivity, etc(Porter, 1998)
- **Chinese industrialization strategy:** clustering
- Japan strategy: Flying geese regional cluster & with strong SMMEs linkages

BACKGROUND TO THE STUDY

- Nigeria vs China: Both have significant number of clusters but impact different
- Nigeria: Largest economy in Africa but still very resource- based ; oil & gas
- Nigeria's free trade Zone policy
- Nigeria's Otigba Hardware Cluster: ICT, 2nd most successful in Nigeria

networking services

branded computer/equipment

hardware and software sales

assemblage of computer & accessories,

production/installation,

IT services/marketing

general IT maintenance and repairs,

sales of peripherals & other items

RESEARCH SCOPE

- Focus on Otigba informal ICT cluster in Nigeria
- Carried out full scale survey of 200 out of 4000 micro-enterprises
- 5% of the cluster firm population firms in cluster
- Developed a measurement framework
- Which captured: cluster attributes, knowledge diffusion and forms of scaling-up

RESEARCH INSTRUMENTS & SUBJECTS

- Questionnaire instrument administered to MSE owners in cluster
- MSEs with less than 10 employees
- MSEs offering technical services such as:

STATEMENT OF PROBLEM

- Otigba Cluster is mainly informal with no government support or regulation
- Previous studies on Otigba cluster focused on:
 - size capacity , cluster evolution, mode of operation, performance,
 - production capability, sustainability and constraints of the industry
(Abiola, 2006; Oyelaran-Oyeyinka, 2006; Zeng, 2008; Nwagwu, 2015).
- No study identified on how firms in the cluster overcome financing constraints or scale-up

RESEARCH OBJECTIVES

- To understand the dynamics of knowledge acquisition and diffusion in the cluster
- To investigate different forms of scaling-up in the cluster

CONCEPTUAL FRAMEWORK

- Literature indicate vibrant clusters to have rapid firm growth and high new firm entry

(Porter 1990; Swann and Prevezer, 1996; Baptista, 1996; Porter, 1998; Beaudry et al., 1998; Swann et al., 1998; Baptista and Swann, 1999; Cook et al., 1999; Pandit *et al.*, 2000; 2001a, 2001b; Beaudry and Swann, 2001).

- Firms in clusters found to innovate more and thus grow faster than non-cluster firms.

(Swann *et. al.* 1998)

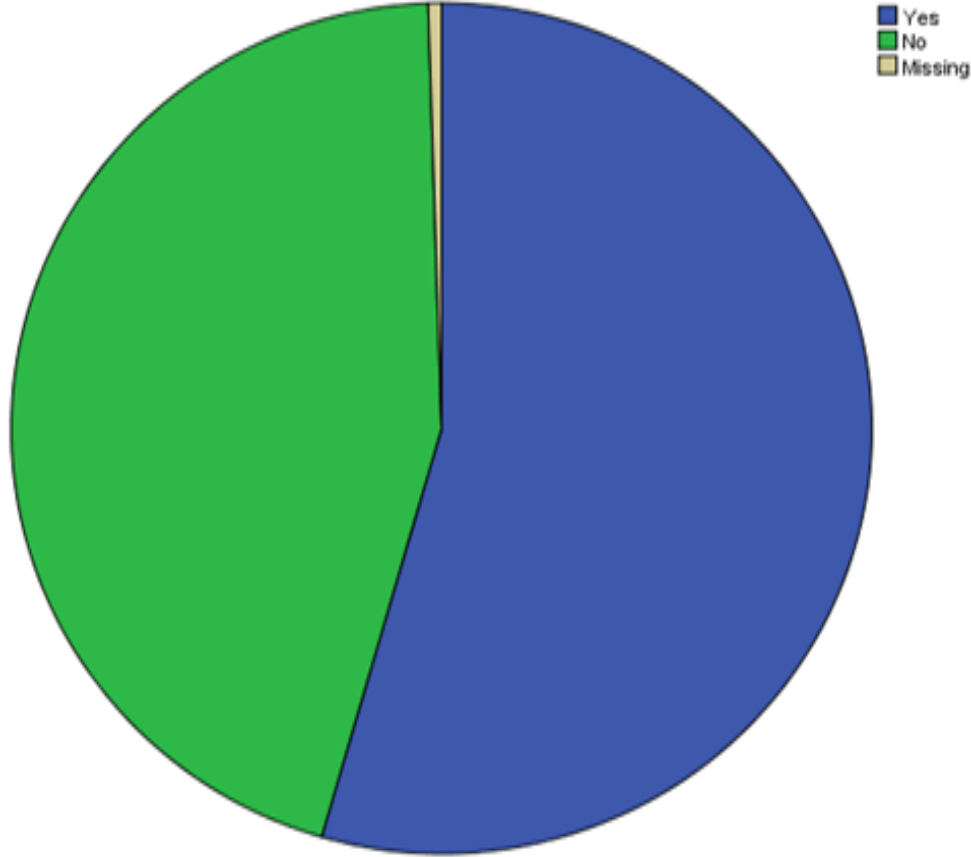
- High technology hubs, Level of science-intensity base of cluster has strong positive effect on new firm formation and firm growth in high technology clusters. (Swann *et. al.* 1998)
- This paper draws insight from these literature
- We propose that knowledge sharing in geographical clusters leads to rapid knowledge diffusion
- We further propose this knowledge diffusion leads to scaling-up of firms and the cluster as a whole.

Results & Discussion



MODES OF OPEN INNOVATION MECHANISM IN THE CLUSTER

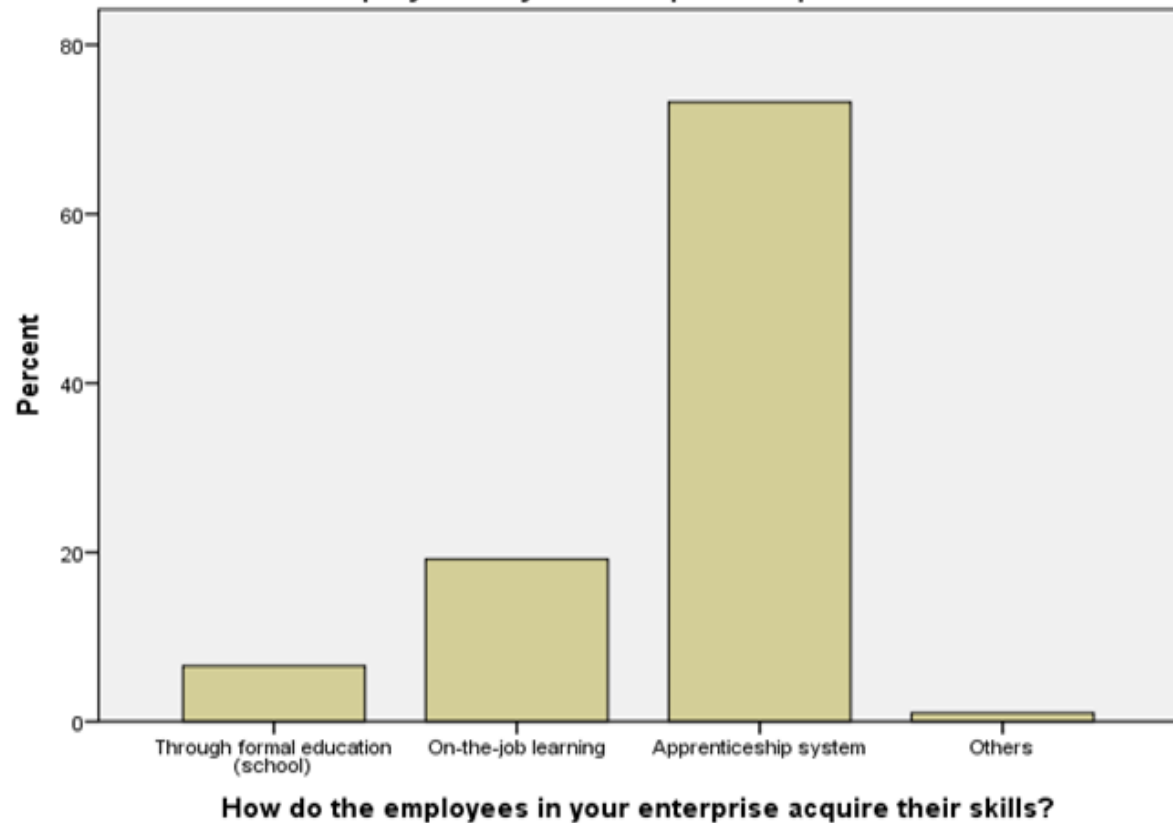
Is there any informal association guiding knowledge dissemination/diffusion



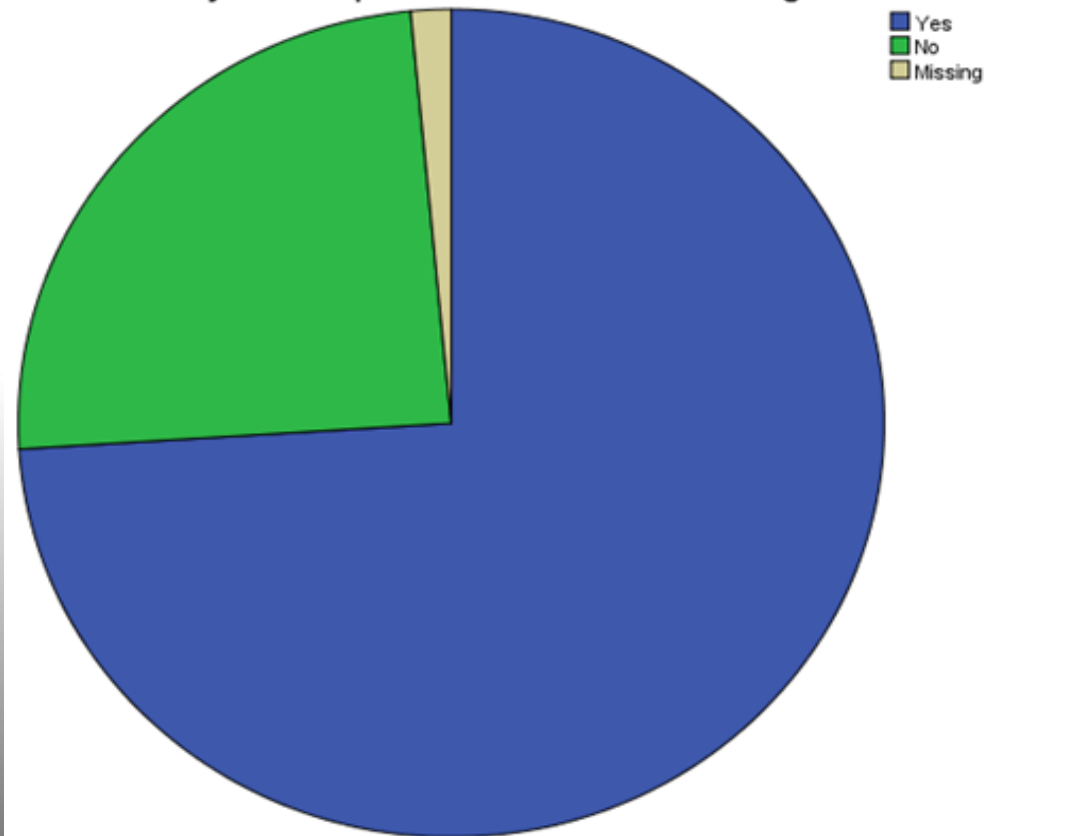
	N	Mean
Exchanging information with other technicians	200	3.45
Sharing experience with other technicians	200	3.20
Engaging technicians from other firms	199	3.17
Sharing tools with other technicians	200	3.07
Sharing equipment with other technicians	200	3.03
Joint purchase of expensive equipment	197	0.32
Joint importation of inputs	194	0.14
Valid N (listwise)	193	

DYNAMICS OF KNOWLEDGE ACQUISITION AND DIFFUSION IN THE CLUSTER

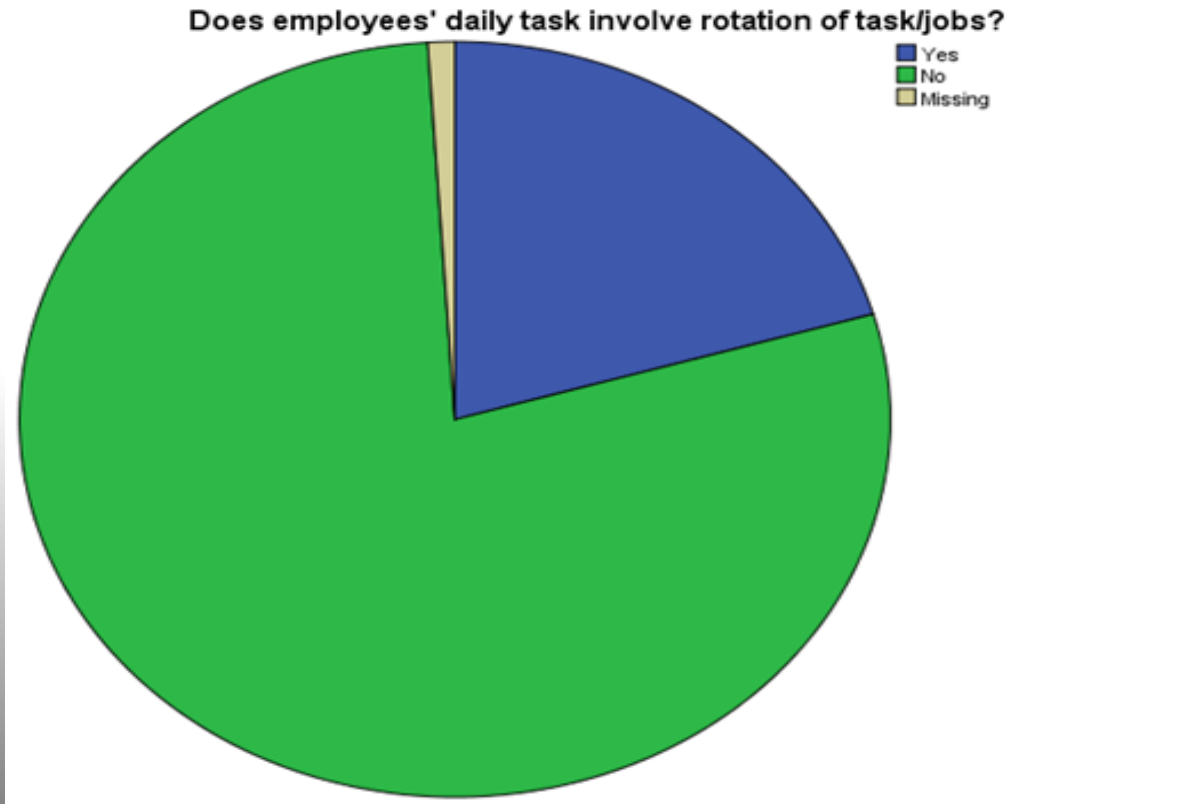
How do the employees in your enterprise acquire their skills?



Does your enterprise conduct in house training for its workforce?



KNOWLEDGE EXCHANGE MECHANISM FOR KNOWLEDGE DIFFUSION

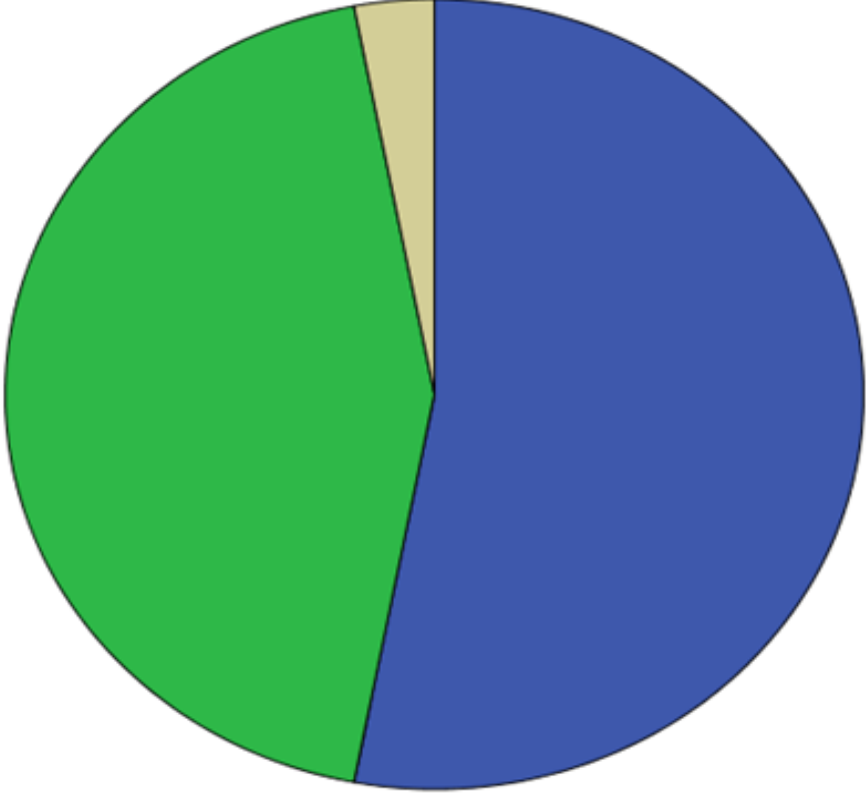


	Frequency	Percent
Valid		
Allotting task with close supervision	111	55.5
in-house training	53	26.5
Allowing the employees to collectively undertake task	33	16.5
Others	1	.5
Total	198	99.0
Missing System	2	1.0
Total	200	100.0

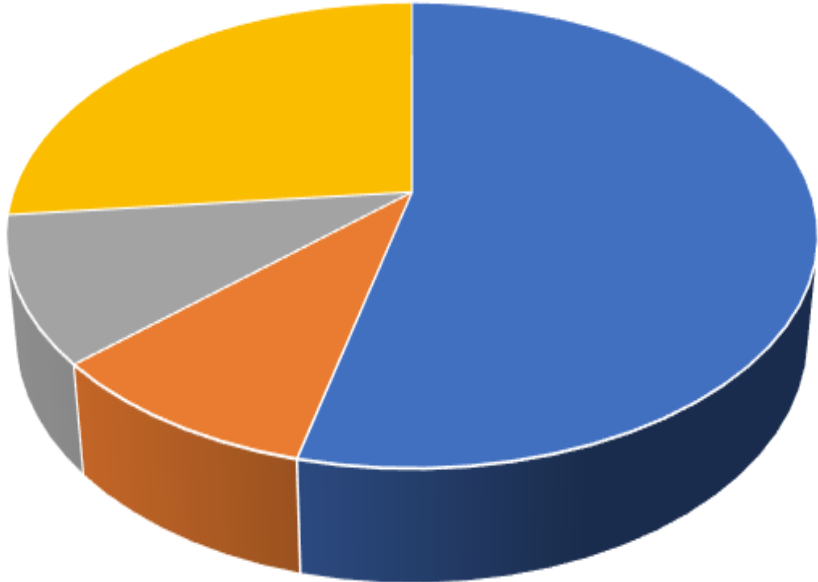
FORMS OF SCALING-UP: IMPROVED ACCESS TO FINANCE

In the last years, did your enterprise increase its capital based or accessed larger funds to run the business?

- Yes
- No
- Missing



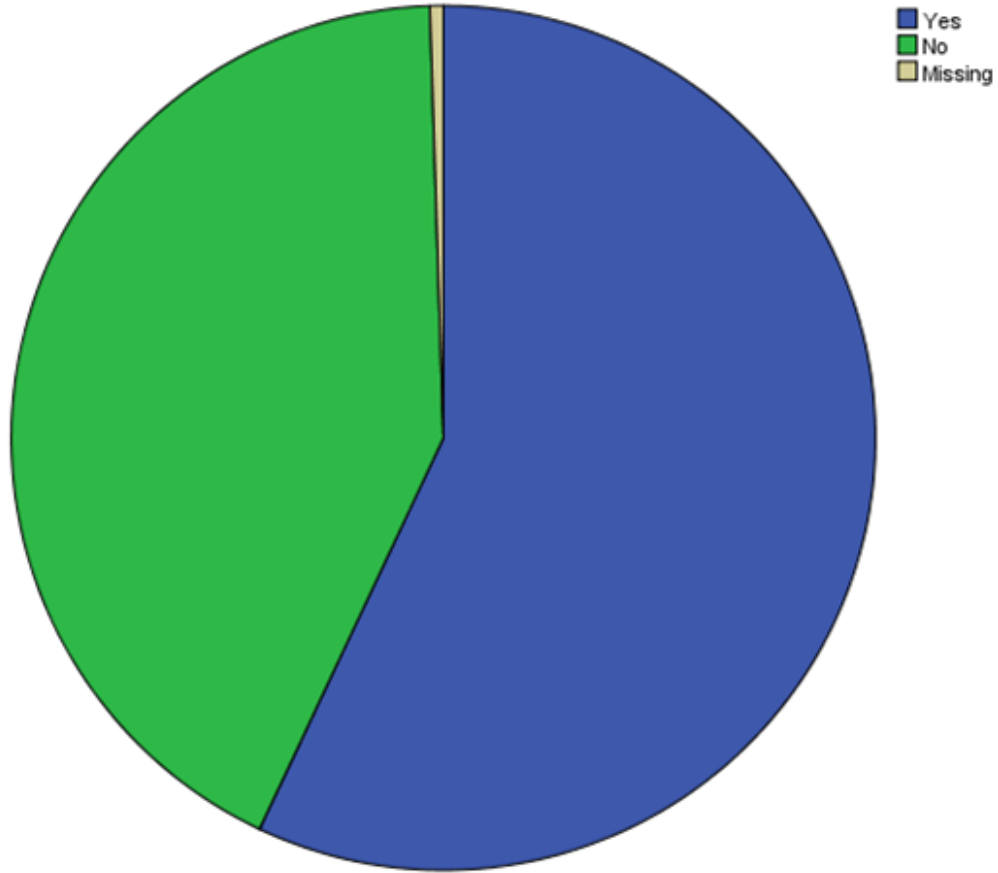
Sources of Increased Funds



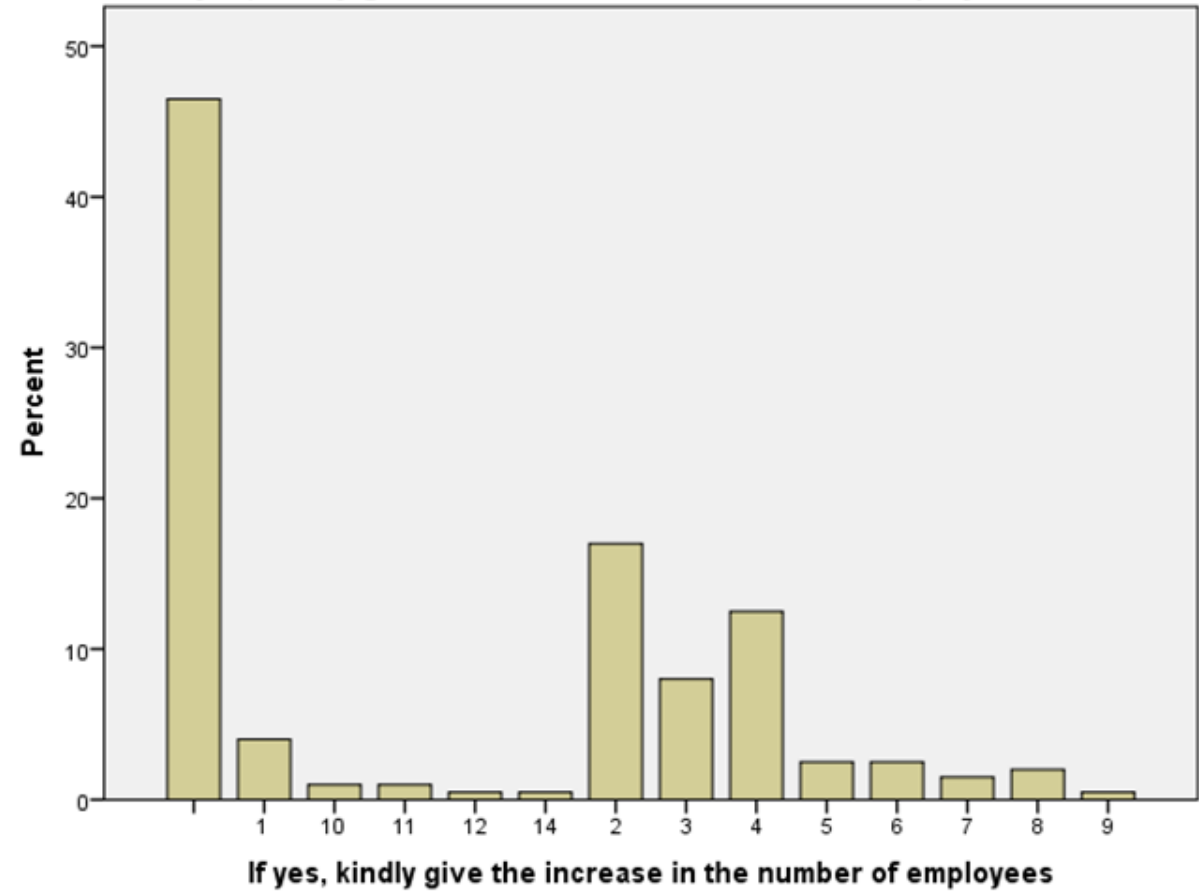
- commercial Banks
- Business Angels
- Micro Credit
- Cooperative Society

FORMS OF SCALING-UP: INCREASE IN WORKFORCE

In the last years, did your enterprise increase its work force (permanent or contract employees) to run the business?

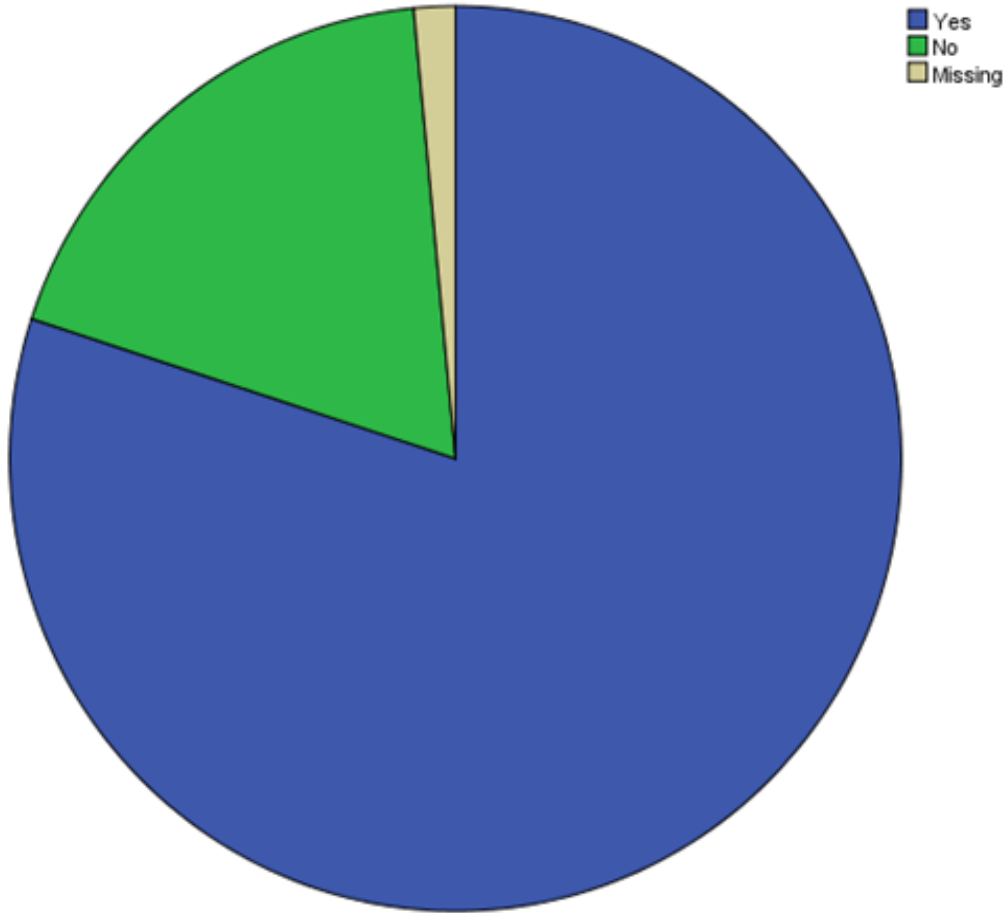


If yes, kindly give the increase in the number of employees

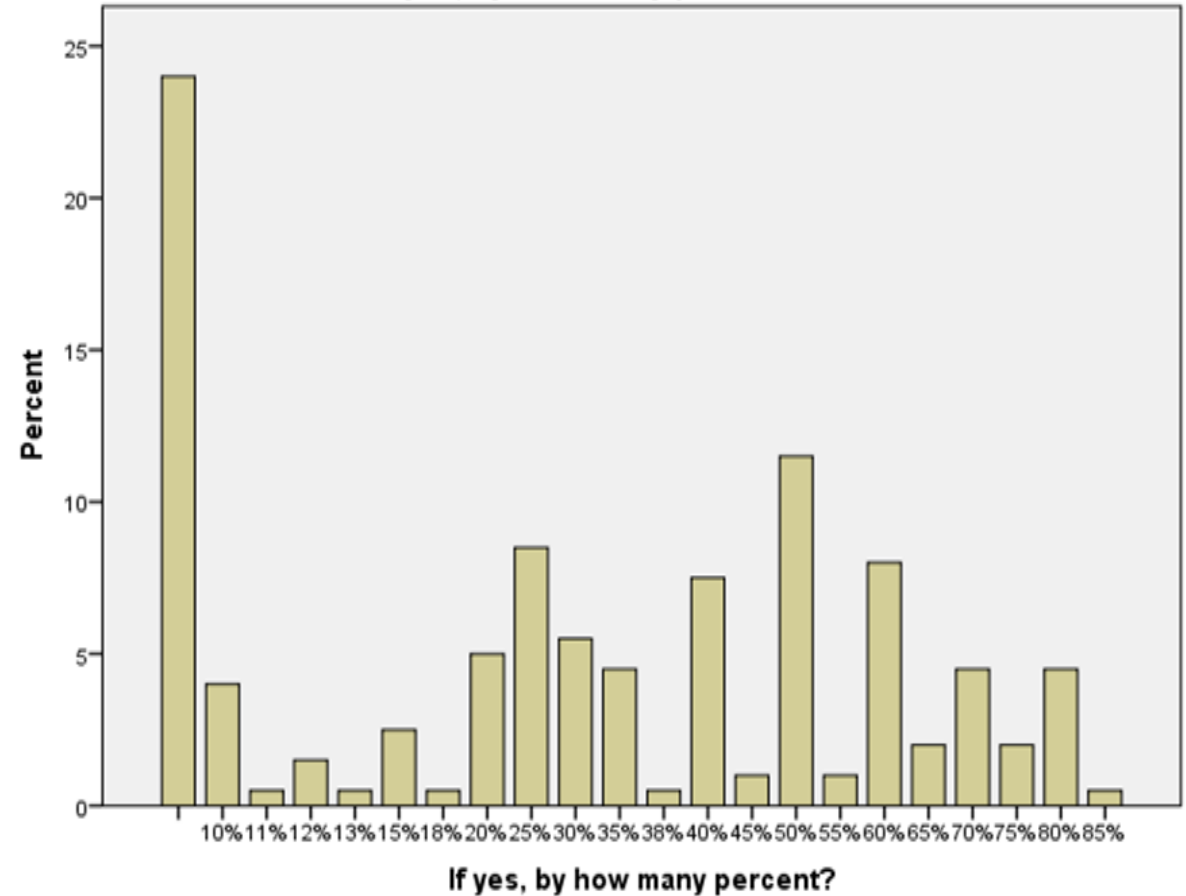


FORMS OF SCALING-UP: % INCREASE IN GROSS EARNINGS

In the last year, did your enterprise record increase in its annual gross earnings?

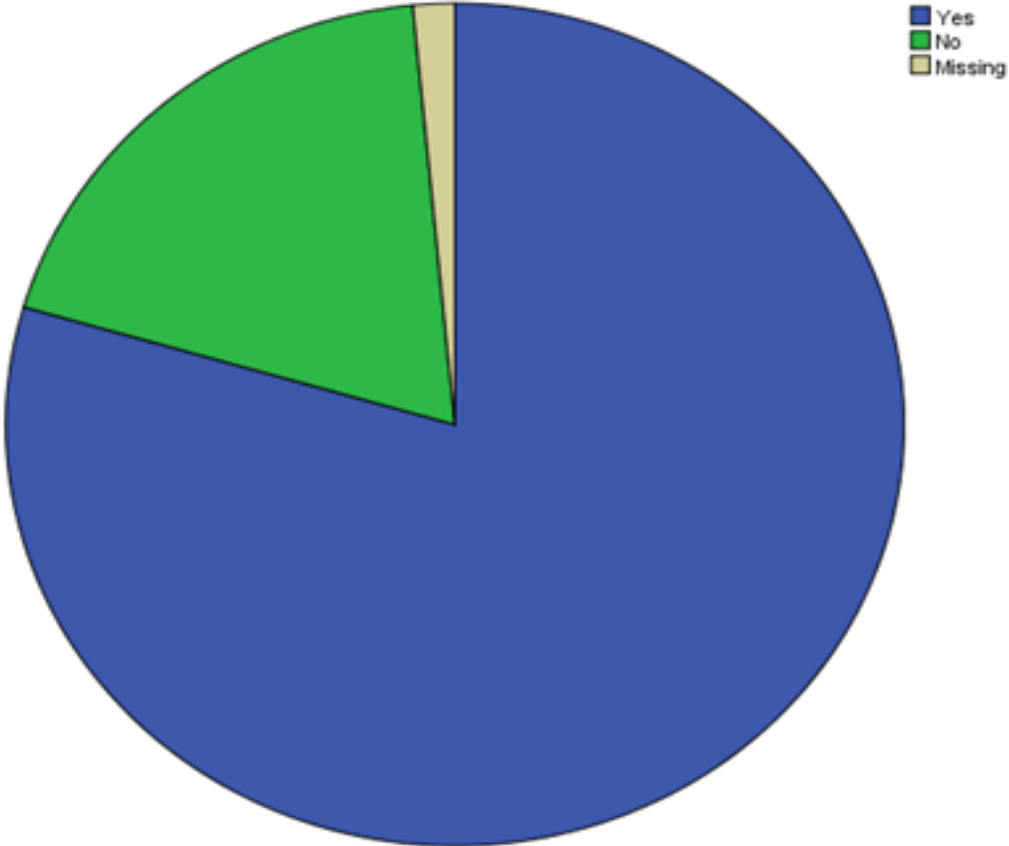


If yes, by how many percent?

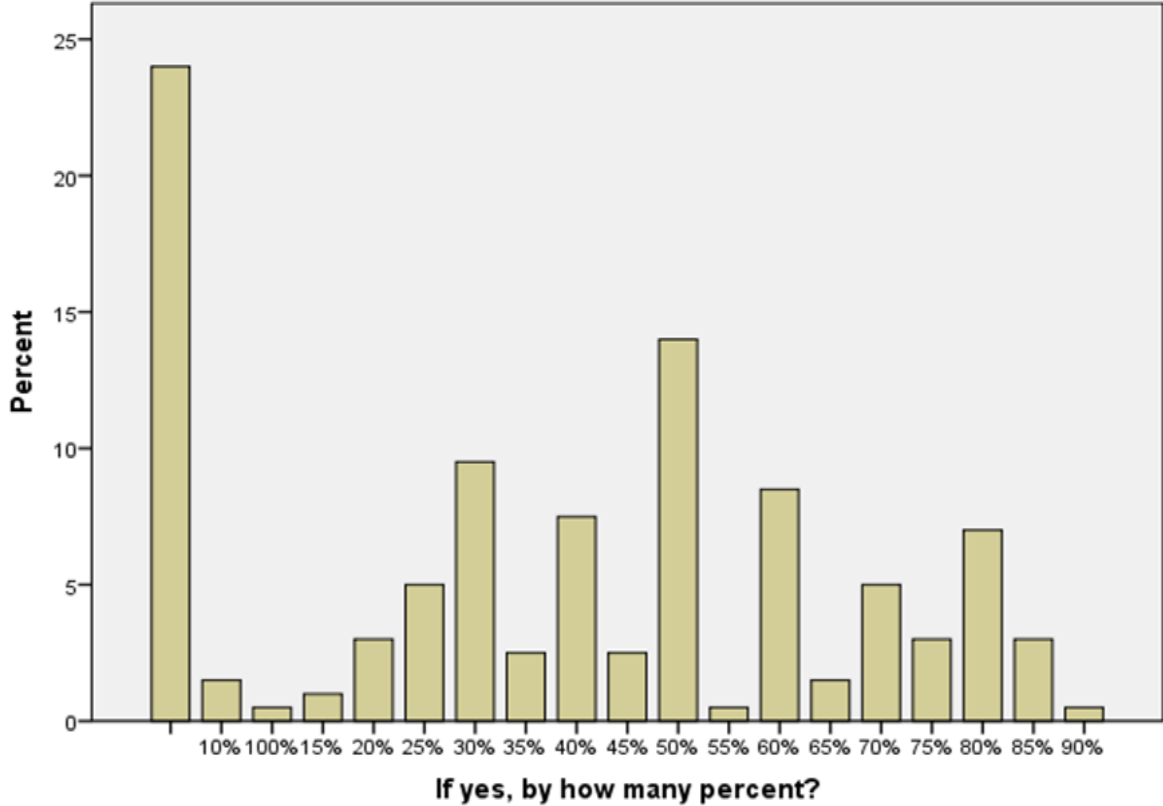


FORMS OF SCALING-UP: % INCREASE IN GROSS SALES

In the last years, did your enterprise record increase its annual sales volume?



If yes, by how many percent?



CONCLUSIONS

- Knowledge acquisition through informal and formal methods
- Apprenticeship system and indigenous knowledge systems- Informal
- University education and other training – Formal
- Knowledge diffusion was communal in the cluster
- Diffusion through trade associations and unions
- Knowledge sharing seen as instrument of collective advancement
- Rapid growth mainly due to knowledge sharing not access to finance
- Firms compete collectively as a cluster with international market through open collaborative innovation .

IMPLICATIONS OF STUDY

- Knowledge-based firms/networks can overcome barriers to access finance through collaborative innovation in the cluster.
- Recommended that government, unions, professional bodies & associations and support agencies see knowledge sharing and collaborative problem-solving as key currency for firms to trade with.
- What matters:
 - How much an enterprise knows
 - How fast it can learn something new
 - How much knowledge it is willing to volunteer & share
- These determine the vibrancy of the enterprise not how much it has

THANK YOU

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