Lahore School of Economics

Innovation & Technology Centre

INNOVATION IN THE TEXTILE SECTOR OF LAHORE DIFFERENCES BETWEEN EXPORTERS AND NON-EXPORTERS

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AUTHORS

Dr. Azam Amjad Chaudhry
Professor & Dean, Faculty of Economics, Lahore School of Economics

Dr. Theresa Thompson Chaudhry
Professor, Faculty of Economics, Lahore School of Economics

Saman Zahra Khan
Research Fellow, Innovation and Technology Centre, Lahore School of Economics

Muaz R. Chaudhry
Research Associate, Innovation and Technology Centre, Lahore School of Economics

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RESULTS AT A GLANCE

Who was surveyed?

60%

of exporting firms in the sample were large-sized firms, while a majority of non-exporting firms were small-sized firms (38%).

40%

of exporting firms were selling 100% of their output abroad.

33%

of exporting firms were exporting their output to Europe, while 30% of firms reporting that they were exporting the multiple destinations worldwide.

91%

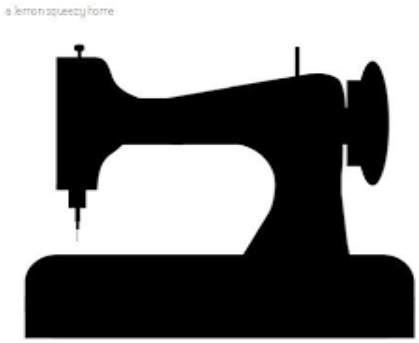
of exporting firms and 81% of non-exporting firms in the sample said that they innovated i.e. purchased new machinery/equipments in the last 10 years.

64%

Of exporting firms innovated recently i.e. during the last 1-5 years. Whereas, 42% of non-exporting firms in the sample innovated between 5-10 years ago.

The most machines bought by exporting and non-exporting firms in the textiles and readymade garments sectors were Stitching machines.

The second most purchased machineries by exporting firms were Ring Machines, while the second most purchased machinery by non-exporting firms were Carding Machines.



Characteristics of Innovating firms

82%

Of surveyed exporting firms claimed to have purchased their most recent technology/equipment from abroad. Whereas, half (50%) of non-exporting firms purchased their most recent technologies from Pakistan.

81%

Of the exporting firms reported that they adopted already established machinery/software. Whereas, 94% of the non-exporting firms said that they adopted already established machinery/ software.

85%

Of exporting firms and 69% of non-exporting firms reported that they preferred buying already established technologies.

61%

of non-exporting firms and 48% of exporting firms reported that they initiated innovations themselves.

61%

Of exporting firms claimed that they were planning to introduce a new technology in the next 12 months. While, 54% of non-exporting firms were not planning to introduce a new technology in the next 12 months.

Barriers Faced by Innovating Firms

98%

Of surveyed non-exporting firms faced major financial barriers while trying to perform technological innovations. Also, 90% of exporting firms faced major financial barriers while trying to innovate.

94%

Of non-exporting firms said that the lack of opportunities was a major barrier to technologically innovating. While, 89% of exporting firms said that the lack of opportunities was a major barrier to innovating.

Sources of Funding Innovations Expenditures

58%

Of exporting firms reported that their innovation related expenditures were financed by using both internal resources (equity funds) and borrowing from banks/financial institutions. While, 58% of non-exporting firms reported that their innovation expenditures were financed by their own equity funds/internal resources.

Types of Innovations

Majority of exporting and non-exporting firms innovated in the areas of Product and Marketing

A majority of exporting firms reported that they innovated in the areas of Product (90%), Marketing (87%), Process (80%), Technology/Equipment (76%) and Business Model (61%). While, non-exporting firms reported that they innovated in the areas of Product (81%), Marketing (76%), Process (76%), Technology/Equipment (54%) and Business Model (35%).

Results of Innovation

80%

Of exporting firms said that their revenues increased as a result of innovation. While, only 32% of non-exporting firms that their revenues increased as a result of innovation.

94%

Of exporting firms reported that the quality of their products improved as the result of innovation. While, only 62% of non-exporting firms said that the quality of their products improved as the result of innovation.

74%

Of exporting firms reported that they did not have to retrain their employees to adopt new technologies. While, 92 % of non-exporting firms said that they did not have to retrain employees as a result of innovation.

88%

Of exporting firms and 92% of non-exporting firms did not face resistance from employees while trying to introduce innovation.

70%

Of exporting firms reported that their cost of production decreased as a result of innovation. While only 32% of non-exporting firms said that their cost of production decreased as a result of innovation.

14%

Of surveyed exporting firms and only 8% of non-exporting firms said that lowered their prices as a result of innovation

Drivers of Innovation

46%

of exporting firms reported pressure to increase quality as one of the most significant drivers of initiating innovation followed by the desire to increase market share (38%). Whereas, 61% of non-exporting firms reported that pressure to increase quality followed by desire to gain/increase market share (15%) were the greatest drivers of initiating innovations.

Impact of Innovation on Profitability

56%

Of exporting firms and 54% of non-exporting firms reported that product innovations led to the greatest increase in profitability.

INTRODUCTION

Productivity growth is critical for long term economic growth. A critical component of productivity growth is innovation and this is usually a major problem in developing countries. The Innovation and Technology Centre (ITC) of the Lahore School of Economics conducted a survey in the year 2018/2019 to compare the growing trends in the field of innovation and technology upgradation among exporting and non-exporting firms from the textile sector of Lahore. The purpose of this survey was to observe the extent, quality and impact of innovation activities on the performance and profitability of the innovating firms. The survey also looked at the barriers faced by the innovating firms in this region.

The data was collected from 125 firms involved in manufacturing readymade garments and in textile sectors during the period from September to December 2018. The firms were also characterized in terms of exporters and non-exporters in order to see the innovative behavior of each.

Some basic information on the surveyed firms is given below:

Sample Statistics:

Category	Total Firms	Small	Medium	Large
Number of firms	125	20	42	63
Exporters	87	6	29	52
Non-exporters	38	14	13	11
Textile firms	93	9	31	53
Readymade Garment firms	33	11	11	11
Innovating firms	110	17	32	61
Non-innovating firms	15	3	10	2

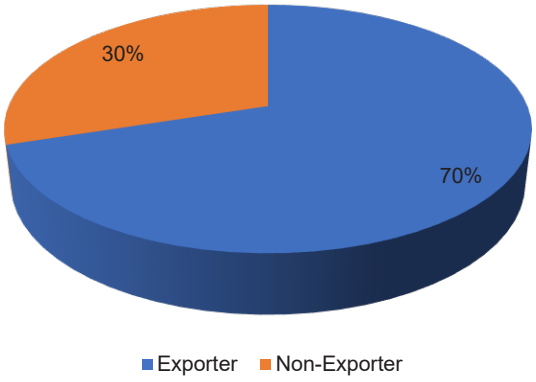
1. REVIEW OF TECHNOLOGICAL INNOVATIONS

1.1 Exporter or Non- Exporter

A majority of firms in the sample were exporting their output abroad, while 30% of firms in the sample were non-exporters.

Figure 1.1: In the sample of 127 firms, 70% of firms were exporting some of their output abroad while the remaining 30% were non-exporters

Is your firm an exporter of products?

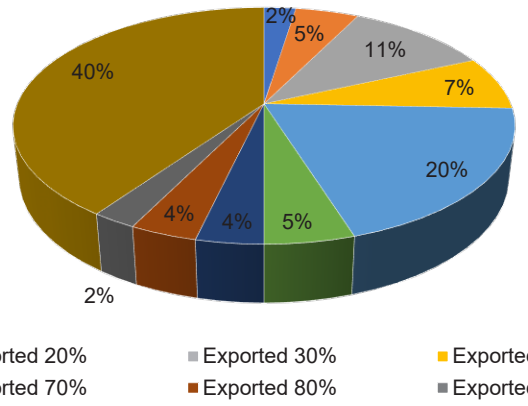


1.2 Percentage of Output Exported:

When asked about the percentage of output exported, 40% of exporting firms said that they were selling 100% of their output abroad.

Figure 1.2: 40% of total exporting firms reported that they were exporting 100% of their output abroad

If the firm exports, what is the %age of output exported?

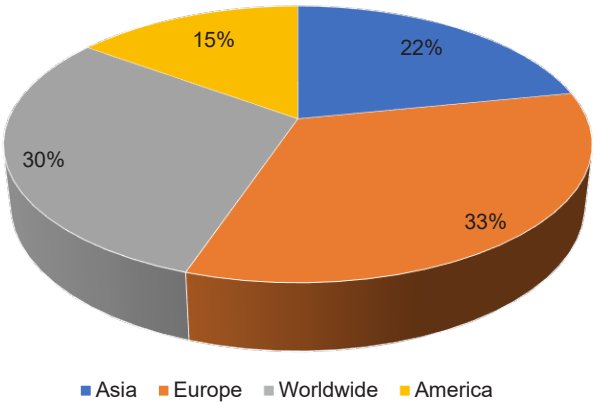


1.3 Export Destinations:

When asked about the export destinations, a majority of exporting firms in the sample were exporting their output to Europe while 30% said they the export worldwide.

Figure 1.3: 33% of firms were exporting their output to Europe, followed by Worldwide (30%) and Asia (22%)

Regions where firms were exporting their output?



1.4 Size of Firms:

When asked about their size of firms, a majority of exporting firms were large-sized firms, while a majority of non-exporting firms were small-sized firms.

Figure 1.4a: 60% of the exporting firms were large

What is the approximate number of employees in your firm?

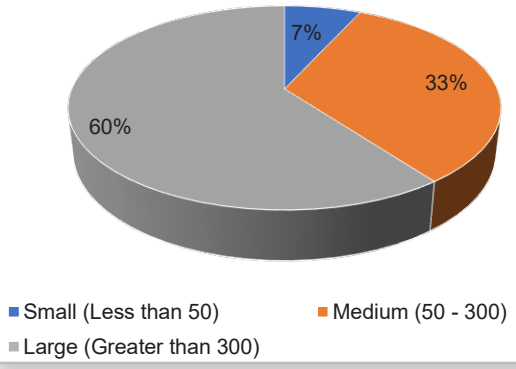
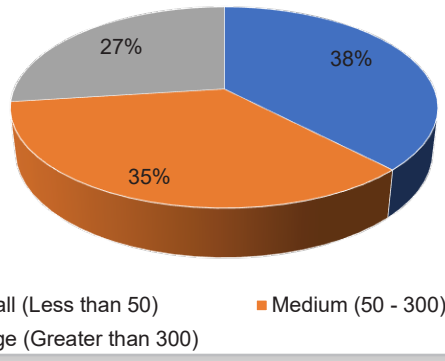


Figure 1.4b: A majority of non-exporting firms (38%) in the sample were small firms

What was the approximate number of employees in your firm?



1.5 Purchased New Machinery

A simple measure of innovation is the purchase of machinery. Turning to the purchase of machinery by firms, it is useful to see what percentage of firms purchased new machinery:

Ninety percent of exporting firms in the sample said that they innovated i.e. purchased new machinery and/or software in the last 10 years; whereas, 81% of non-exporting firms said that they innovated during the last 10 years.

Figure 1.5a: 91% of exporting firms said that they have innovated i.e. purchased new machinery/equipment in the last 10 years

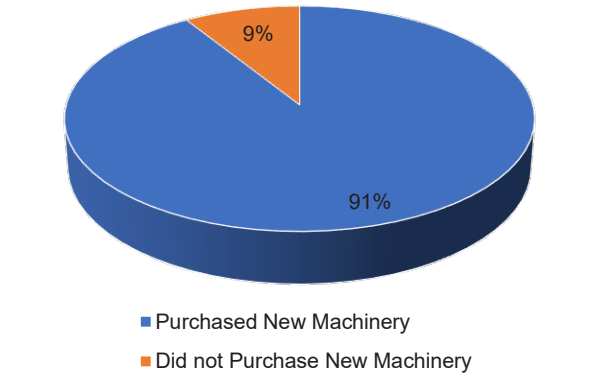
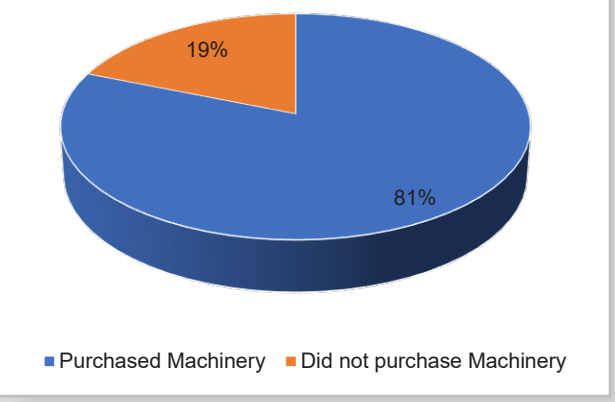


Figure 1.5b: 81% of non-exporting firms said that they purchased new machinery/equipment in the last 10 years



1.6 Most Recently Acquired Machinery/Equipment/ Software

When asked about the names of four most recently acquired equipment/software, a majority of exporting firms (22 firms) and non-exporting firms (15 firms) purchased Stitching machines. Also, the second most purchased machines by exporting firms (18 firms) were Ring Machines, while the second most purchased machines by non-exporting firms (12 firms) were Carding Machines.

Figure 1.6 a: Majority of exporting firms bought Stitching Machines, Carding Machines, Ring Machines and Bartake Machines

4 recently acquired machines by exporting firms

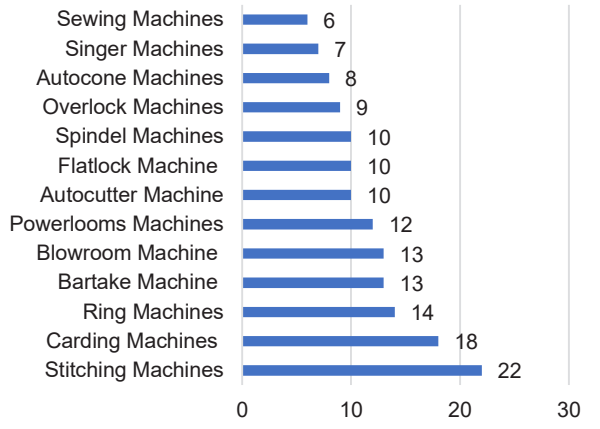
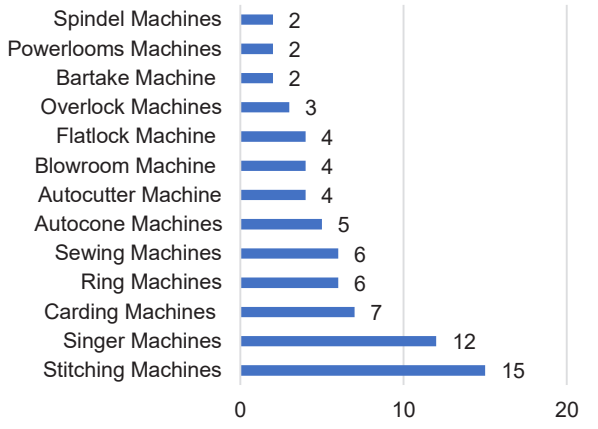


Figure 1.6 b: Majority of non-exporting firms bought Stitching Machines, Singer Machines, Carding Machines, Ring Machines and Sewing Machines

4 recently acquired machines by non-exporting firms



1.7 Purchased Locally or from Abroad

82% of exporting firms claimed to have purchased the technology/equipment from abroad Whereas, only 50% of non-exporting firms purchased their new technology from abroad.

Figure 1.7a: A majority of exporting firms (82%) bought their both 'last 4 technologies/machines from abroad'

Where did you purchase the last 4 technologies from?

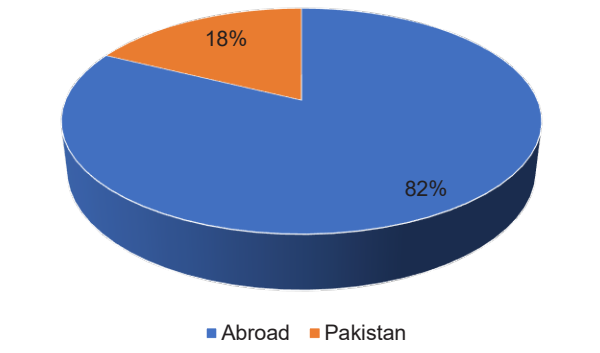
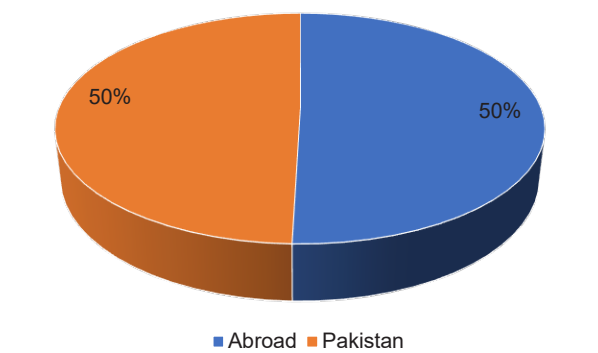


Figure 1.7b: Half of non-exporting firms bought both 'last 4 technologies/machines from abroad', while the other half bought from within Pakistan

Where did you purchase the last 4 technologies from?



1.8 Age of Technology

The timing of innovation is also important. In our sample, 64% of exporting firms innovated in the last 1-5 years. Whereas, 42% of the non-exporting firms innovated in the last 5-10 years.

Figure 1.8a: A majority of exporting firms bought their latest equipment/technology recently between 1-5 years ago

How many years ago did you purchase the last 4 Equipments/Technologies?

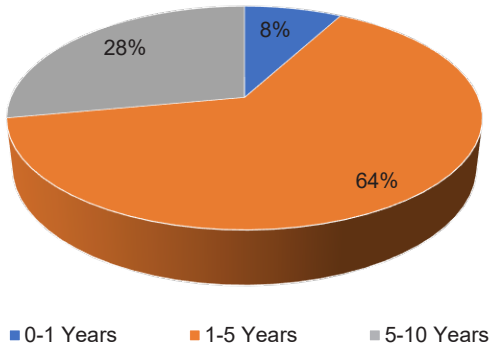
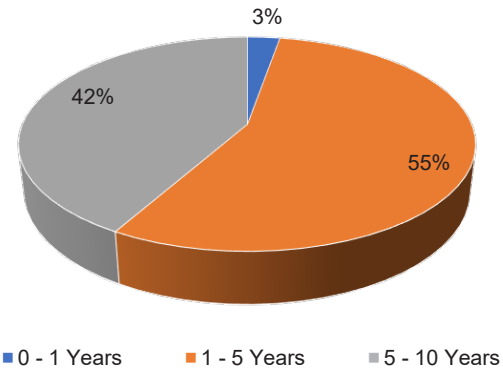


Figure 1.8b: More than half non-exporting firms (55%) bought their latest equipment/ technology between 1-5 years ago

How many years ago did you purchase the last 4 Equipments/Technologies?



1.9 State of the Art or Already Established

In our sample, a significant percentage of non-exporting firms (94%) reported that they adopted already established machinery/software. Whereas, only 19% of exporting firms adopted state of the art technologies/ equipment.

Figure 1.9a: A majority of exporting firms (81%) adopted state of the art technologies

Was the technology state of the art or already established? (top 4 technologies)

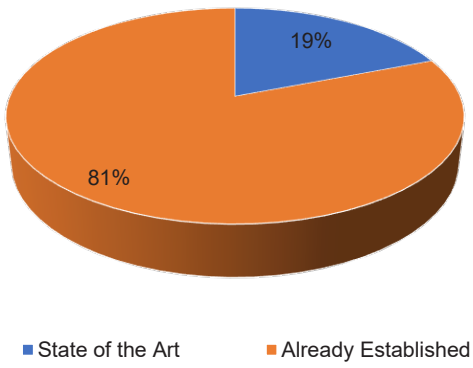
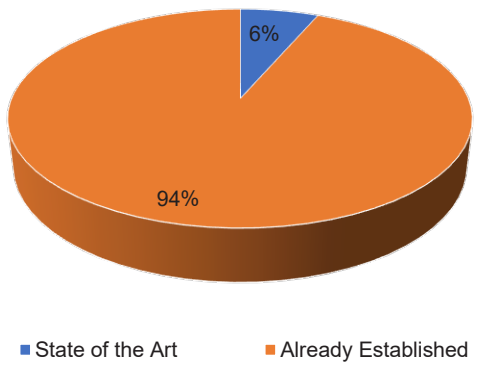


Figure 1.9b: A majority of non-exporting firms (94%) adopted already established technologies

Was the technology state of the art or already established? (top 4 technologies)



1.10 Created vs Bought technology

When firms were asked if they preferred making or buying new innovations, a majority of exporting firms (85%) reported that preferred buying innovation, while only 6% of exporting firms preferred developing their own innovations. Looking at the non-exporting firms, 69% of firms preferred buying already established technologies, while only 3% of firms preferred developing their own innovations.

Figure 1.10a: 85% of exporting firms reported that they preferred buying already established technolgies/softwares

Do you prefer buying or making innovations?

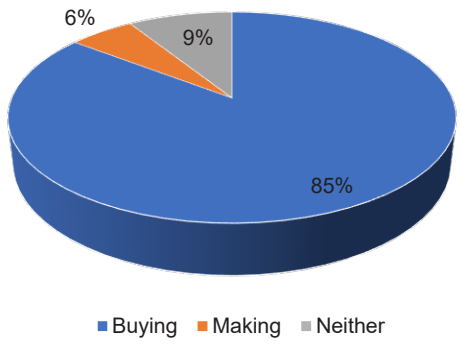
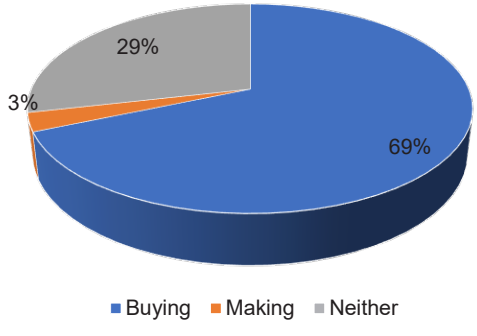


Figure 1.10b: 69% of the non-exporting firms reported that they preferred buying already established technologies/ softwares

Do you prefer buying or making innovations?



1.11 Planning to Introduce New Technology

The survey also analyzed the future innovation plans of firms. A greater percentage of exporting firms (61%) claimed that they were planning to introduce new technology again in the next 12 months; while, 54% of non-exporting firms responded that they were not planning to innovate in the next 12 months.

Figure 1.11a: 60% of the exporting firms were planning to introduce a new technology in the next 12 months

Are you planning to introduce a new technology in your firms in the next 12 months?

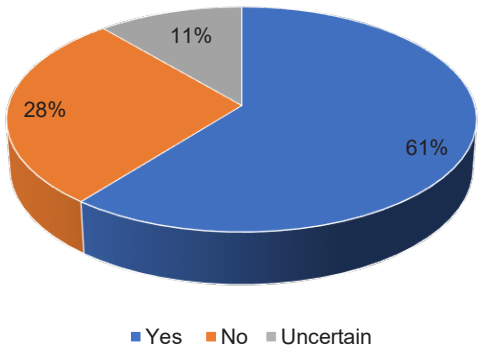
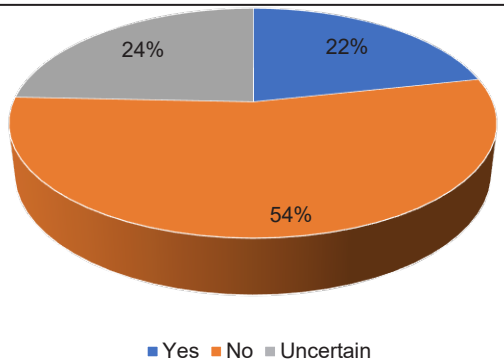


Figure 1.11b: More than half of the non-exporting firms (54%) were not planning to introduce new technology in the next 12 months

Are you planning to introduce new technology in the next 12 months



2. BARRIERS TO TECHNOLOGY ADOPTIONS

The firms were asked to rate the barrier faced in the attempt to adopt new technologies, equipment and or software upgradation. These firms were particularly asked how lack of financing, lack of innovation opportunities, retraining employees and resistance to change affected their technology adoption. The overall analysis of all these barriers revealed that lack of financing was the greatest barrier faced by both exporting and non-exporting firms followed by lack of innovation opportunities.

2.1 Financial Barriers

Firms facing obstacles to technology adoption tend to be less important. In our sample, when asked about the barriers faced while trying to perform technological innovations, one of the greatest barriers faced by both exporting and non-exporting firms was lack of financing. 27% of exporting firms rated this as a major barrier, while 58% of non-exporting firms reported it a major barrier while trying to perform technological innovations.

Figure 2.1 a: 27% of exporting faced major financial barriers while trying to innovate

How would you rate Financial Barriers while trying to perform technological innovations? (1 being no barrier and 5 being major barrier

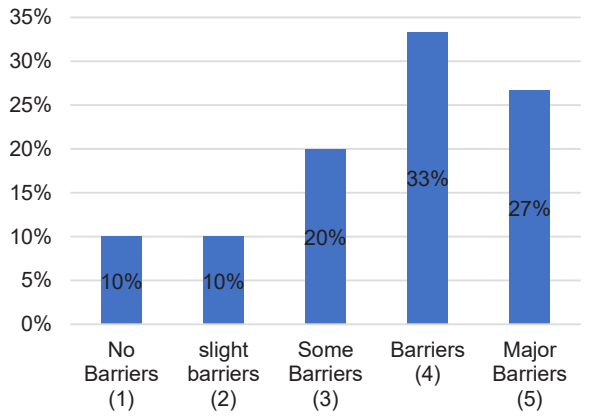
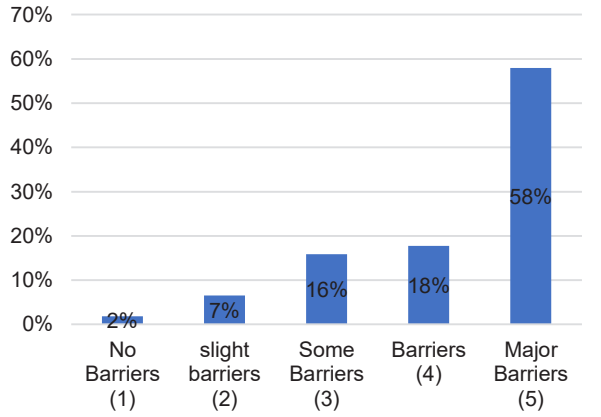


Figure 2.1 b: 58% of non-exporting firms faced major financial barriers while trying to innovate

How would you rate 'financial barriers' while trying to perform technological innovations? (1 being no barrier and 5 being major barrier



2.2 Lack of Innovation Opportunities

The second greatest barrier faced by both the exporting and non-exporting firms while trying to perform technological innovations opportunities was the lack of innovation opportunities.

Figure 2.2 a: 30% of exporting firms found lack of innovation opportunities as a major barrier to innovate

How would you rate Lack of Innovation Opportunities, while trying to perform technological innovations?

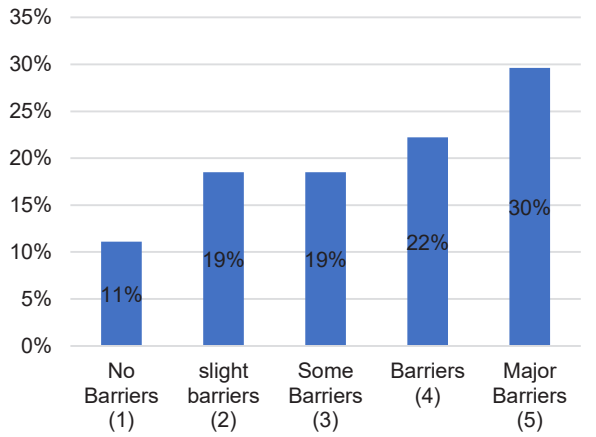
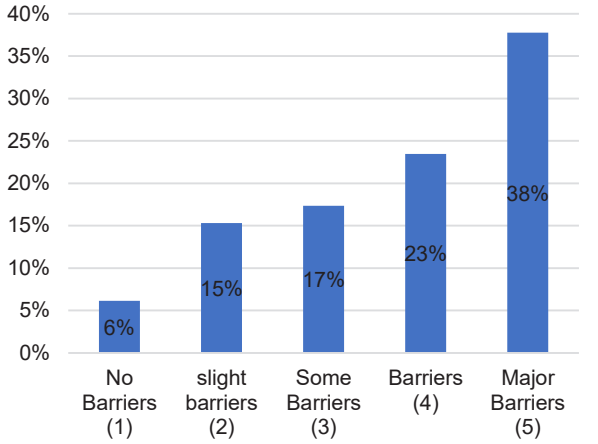


Figure 2.2 b: 38% of non-exporting firms found lack of innovation opportunities as a major barrier while trying to innovate

How would you rate 'lack of innovation opportunities', while trying to perform technological innovations



2.3 Resistance to Change in Workplace

Comparatively a greater percentage of non-exporting firms rated resistance to change as a major barrier to innovation.

Figure 2.3a: 43% of exporting firms faced no resistance by workers to change in workplace

How would you rate Resistance to Change as a barrier while trying to innovate?

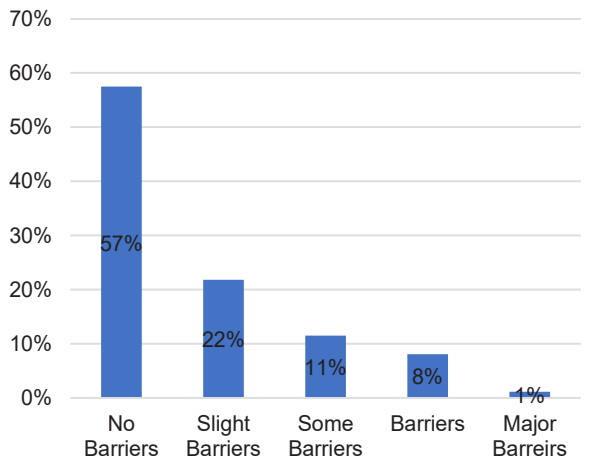
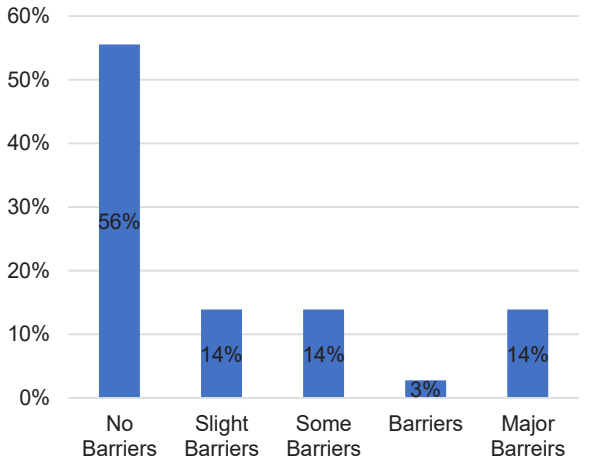


Figure 2.3b: 44% of non-exporting firms faced Resistance by workers while trying to innovate

How would you rate Resistance to Change as a barrier while trying to innovate?



2.4 Retraining of Employees

Comparatively a greater percentage of exporting firms rated retraining employees as a major barrier while trying to perform technological innovations as compared to non-exporting firm.

Figure 2.4a: 61% of exporting firms found as a barriers to innovation

How would you rate Retraining Employees as a barrier while trying to innovate? (1 being no barrier and 5 being major barriers)

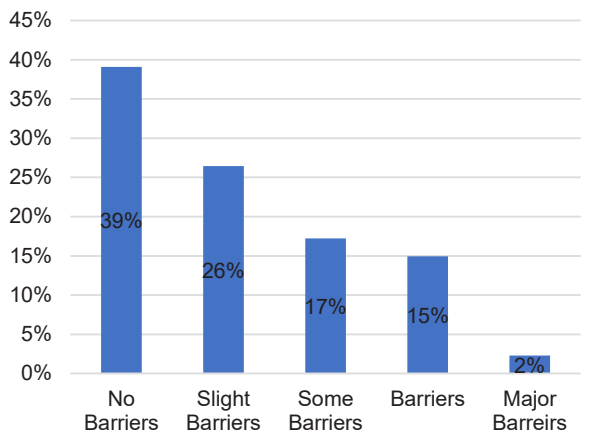
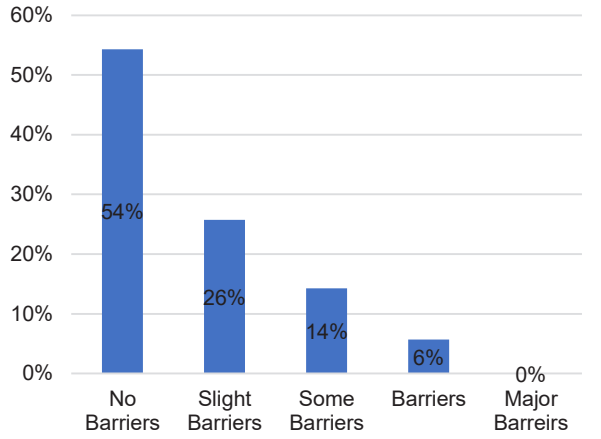


Figure 2.4b: 46% of non-exporting firms found as a barriers to innovation

How would you rate Retraining Employees as a barrier while trying to innovate? (1 being no barrier and 5 being major barriers)



3. COMPETITIVE INNOVATIONS

In this section of the survey, both exporting and non-exporting innovating firms were asked about their major areas of innovations, who were responsible for these technological developments, their sources of funding to finance their innovation activities and drivers of initiating innovations

3.1 Frequency of Different Innovations

When asked about how often the firms innovated in different types of innovation in the last 3 years, exporting firms reported that they innovated in the areas of Product (90%), Marketing (87%), Process (80%), Technology/Equipment (76%) and Business Model (61%). While, non-exporting firms reported that they innovated in the areas of Product (81%), Marketing (76%), Process (76%), Technology/Equipment (54%) and Business Model (35%).

Figure 3.1a: 90% of exporting firms said that they engaged in product innovation at least some of the time

How often did you innovate in the area of product over the last 3 years?

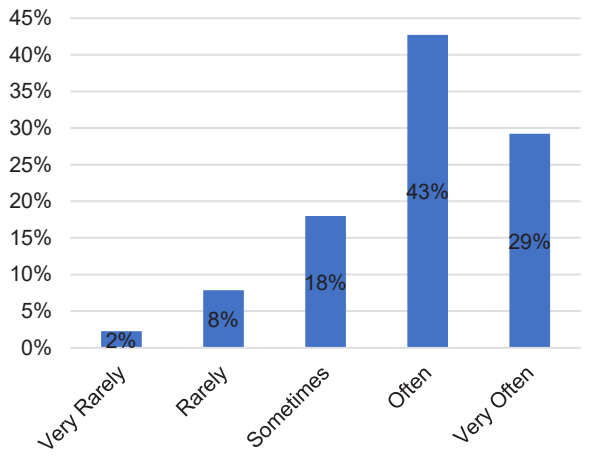
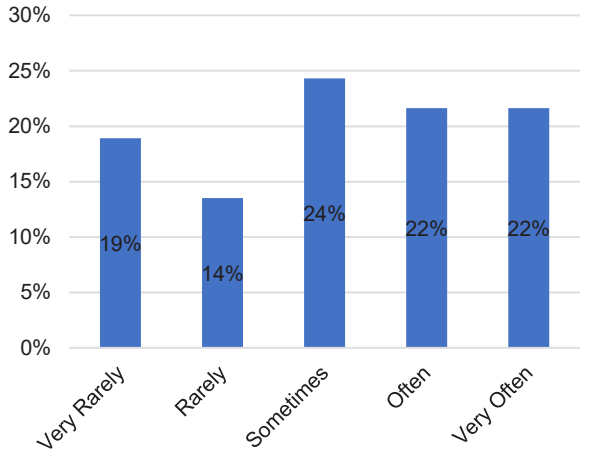


Figure 3.1b: 81% of non-exporting firms said that they engaged in product innovation at least some of the time

How often did your firm innovate in the area of Product over the last 3 years?



When asked about how often they innovated in the area of product, a greater percentage of exporting firms as compared to non-exporting firms reported that they engaged in process innovation relatively often (sometimes, often and very often).

Figure 3.1c: 87% of the exporting firms said that they introduced Marketing innovations at least some of the time

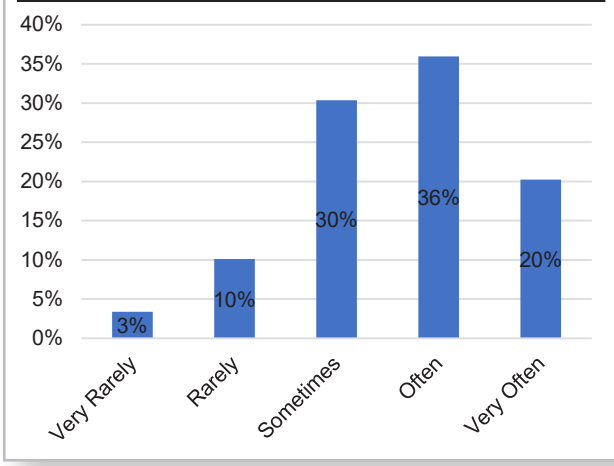
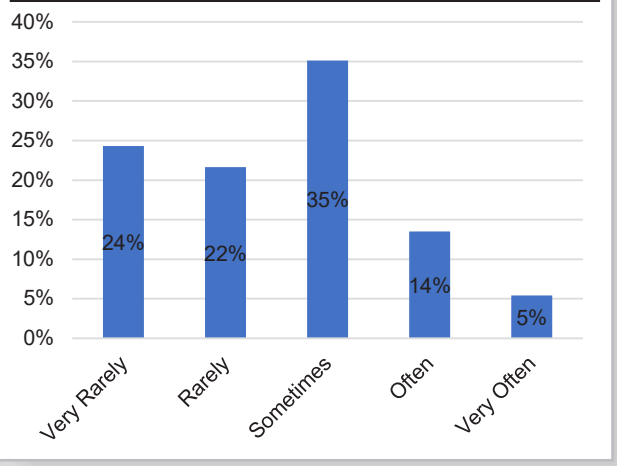


Figure 3.1d: 76% of non-exporting firms said that introduced Marketing innovations at least some of the time



When asked about how often they innovated in the area of marketing, comparatively a greater percentage of exporting firms as compared to non-exporting firms reported that they engaged in marketing innovation relatively often (sometimes, often and very often).

Figure 3.1e: 80% of the exporting firms that they introduced process innovation at least some of the time

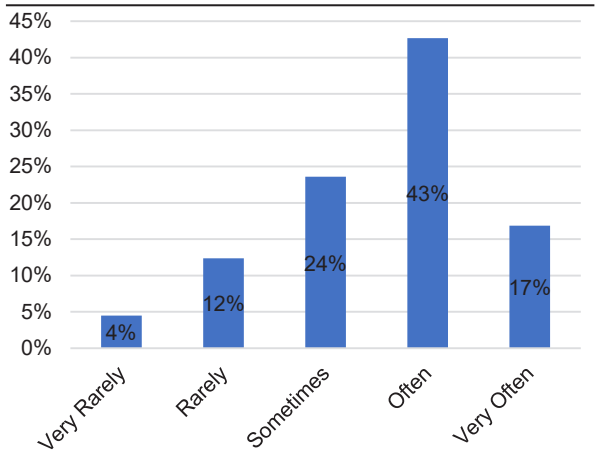
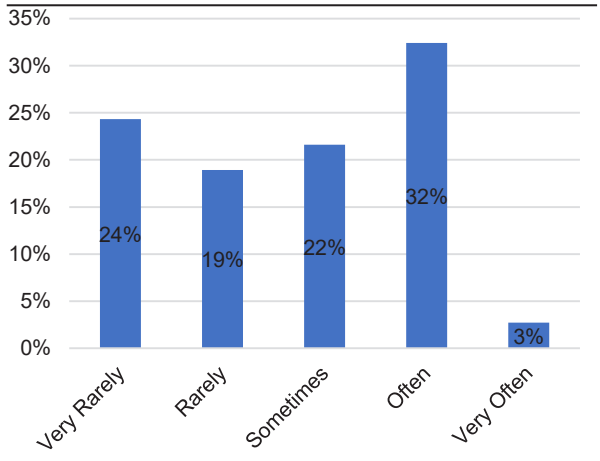


Figure 3.1f: 76% of non-exporting firms said that they introduced process innovation at least some of the time



When asked about how often they innovated in the area of process, comparatively a greater percentage of exporting firms as compared to non-exporting firms reported that they engaged in process innovation relatively often (sometimes, often and very often).

When asked about how often they innovated in the area of technology, a greater percentage of exporting firms as compared to non-exporting firms reported that they engaged in technological innovation relatively often (sometimes, often and very often).

Figure 3.1g: 76% of exporting firms that introduced technology innovations at least some of the time

How often did you innovate in the area of business model over the last 3 years?

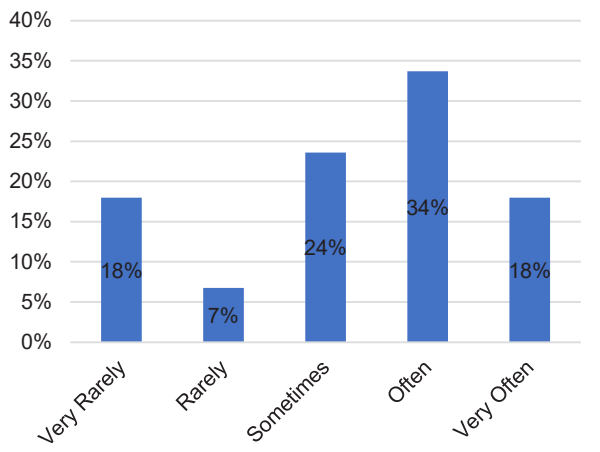
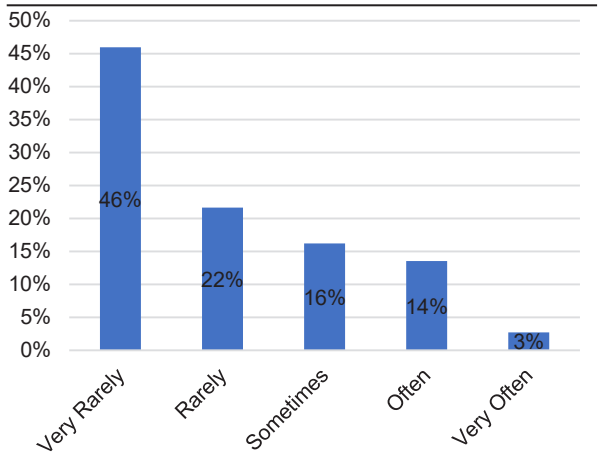


Figure 3.1h: 54% of non-exporting firms said that they introduced technology innovations at least some of the time

How often did your firm innovate in the area of Technology over the last 3 years?



When asked about how often they innovated in the area of business model, a greater percentage of exporting firms as compared to non-exporting firms reported that they engaged in business model innovation relatively often (sometimes, often and very often).

Figure 3.1i: 61% of the exporting firms said that they introduced a new Business Model at least some of the time

How often did your firm innovate in the area of Business Model over the last 3 years?

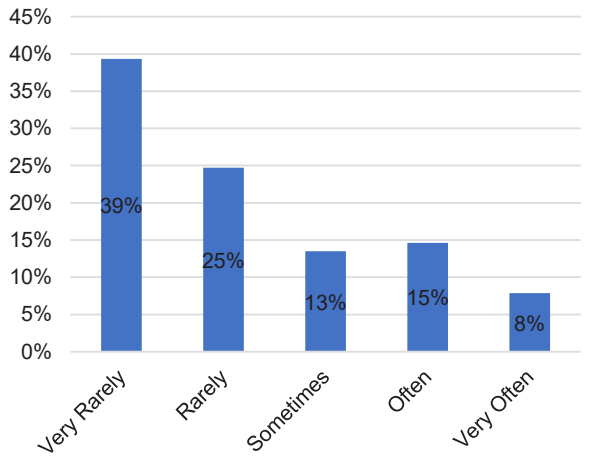
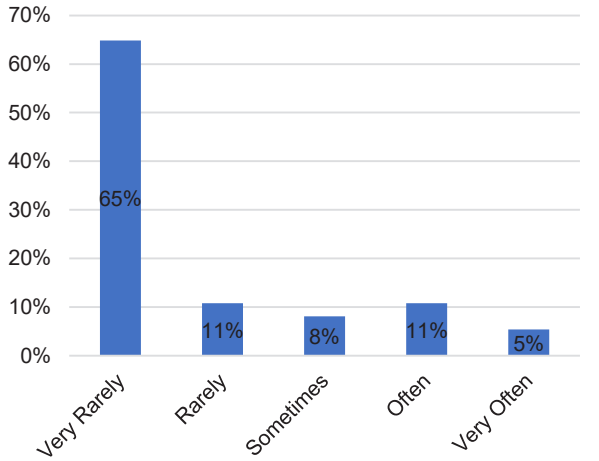


Figure 3.1j: Only 35% of non-exporting firms said that they introduced a new Business Model at least some of the time

How often did your firm innovate in the area of Business Model over the last 3 years?



3.2 Collaborations for New Technology

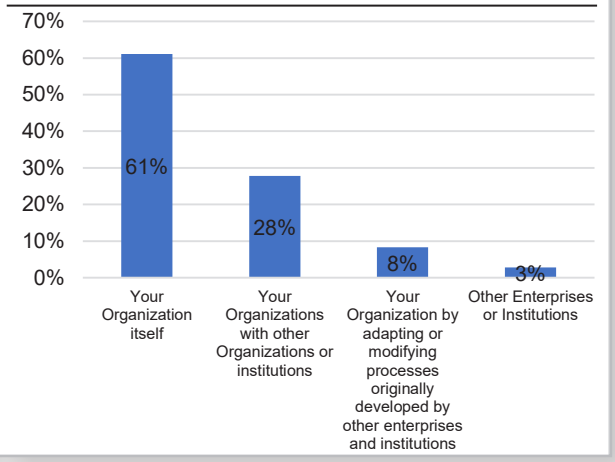
In response to the question about who was responsible for introducing new technologies, a greater percentage of non-exporting firms (61%) reported that their organization themselves were responsible for their innovations and technological developments as compared to exporting firms (48%).

Figure 3.2a: A majority of exporting firms themselves (48%) were responsible for their innovations and technological developments

In majority of innovations who was responsible for these developments?

Figure 3.2b: A majority of non-exporting firms themselves (61%) were responsible for their innovations and technological developments

In majority of innovations who was responsible for these developments?



3.3 Sources of Innovation Funding

Funding of innovation can be a major issue for firms. In our sample, when asked about the sources of funding for innovations, a larger percentage exporting firms said that they used their own resources and banks/financial institutions to fund their innovation activities. While, a majority of non-exporting firms (58%) said that their innovations were financed by their internal resources (equity funds) only.

Figure 3.3a: A majority of exporting firms used their internal resources(equity funds) along with other banks/financial institutions to fund their innovation expenditures

Which sources of funding do you rely upon for your innovation

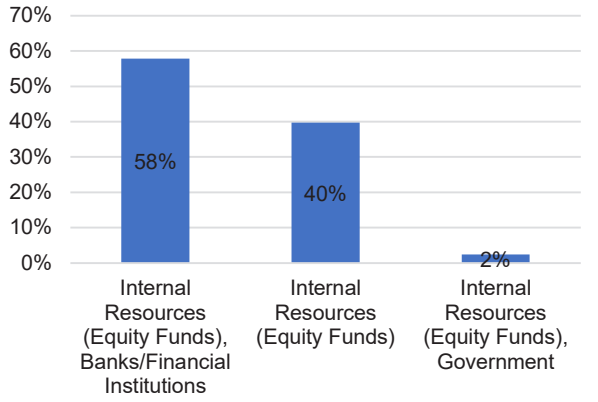
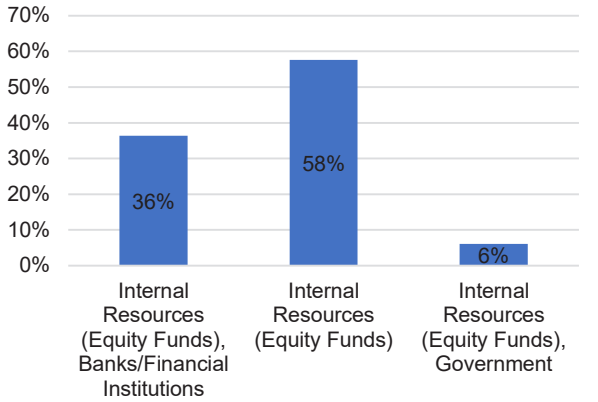


Figure 3.3b: A majority of non-exporting firms (58%) used their internal resources (equity funds) only to fund their innovation expenditures

Which sources of funding do you rely on for your innovation expenditures?



3.4 Reasons for Innovations

The incentives to innovate are important for firms. In our survey, when asked about the most significant driving innovation in their industry, a majority of exporting firms (46%) reported pressure to increase quality was one of the most significant drivers of initiating innovation followed by the desire to increase market share (38%). Whereas, a majority of non-exporting firms pointed to pressure to increase quality (61%) as the most significant driver of initiating innovation followed by the desire to gain/increase market share (15%).

Figure 3.4b: Pressure to improve quality (61%) was the only significant reason for innovation for non-exporting firms

What factor is most significant for your industry as a driver for initiating innovation?

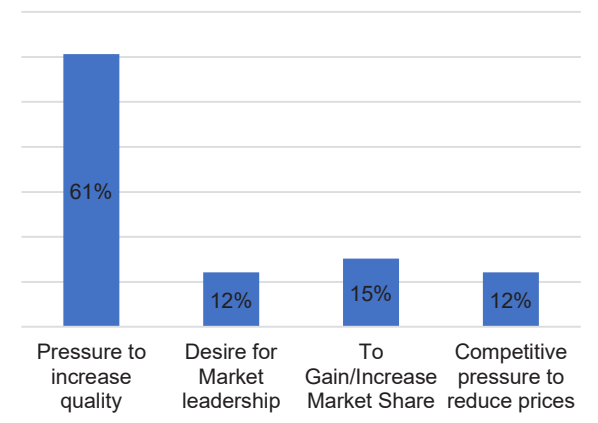
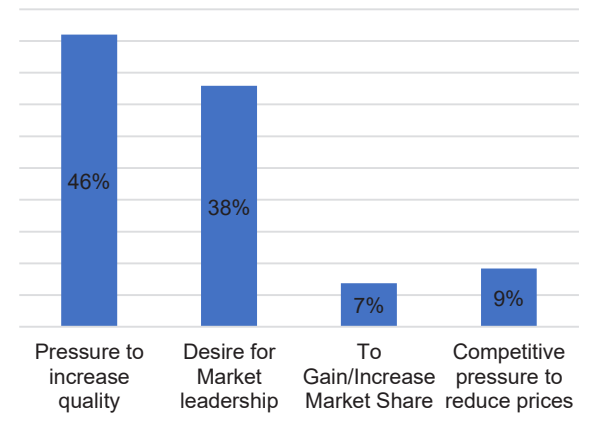


Figure 3.4a:Pressure to improve quality (46%) and desire for market leadership (38%) were the major reasons for innovation for exporting firms

What factor is most significant for your industry as a driver for initiating innovation?



4. RESULTS OF INNOVATION

In this section of the survey, the innovating firms were asked about the impact of their innovation related activities on their revenues, costs of production, quality of product and prices.

4.1 Impact on Revenues

It is also important to understand the impact of firm level innovation. In our survey, in response to the question asked about the impact of firm level innovations on firm's performance, a greater percentage of exporting firms (80%) claimed that innovation led to an increase in revenues while only 32% non-exporting firms reported that their revenues increased as the result of innovation.

Figure 4.1b: Only 32% of non-exporting firms claimed that their revenues increased as the result of innovation

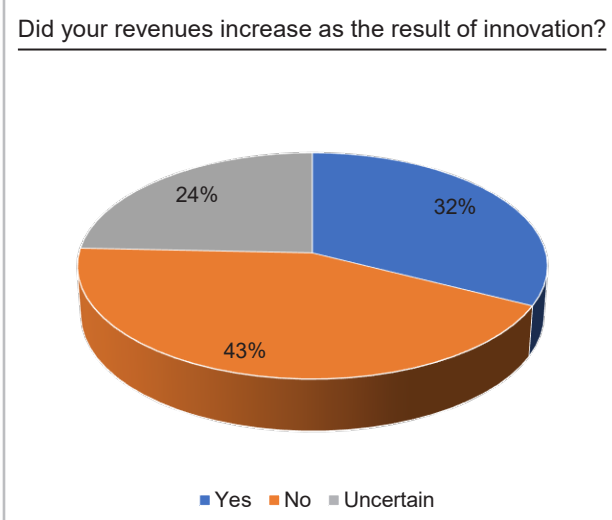
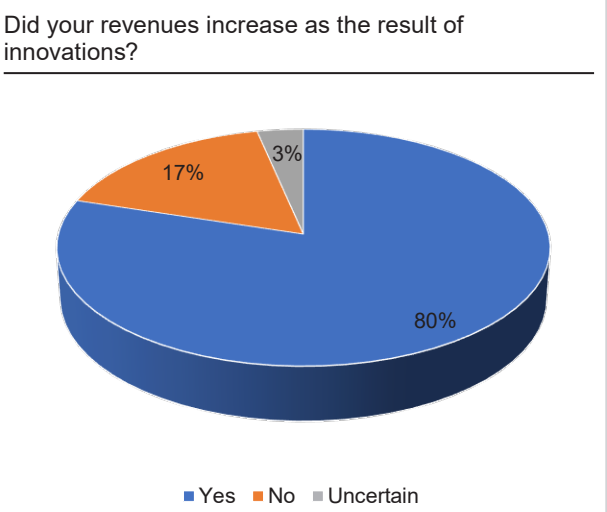


Figure 4.1a: 80% of exporting firms claimed that their revenues increased as the result of innovation



4.2 Impact on Cost of Production

In response to the question asked about the impact of firm level innovations on firm's cost of production, 70% of exporting firms claimed that innovation resulted in reduced cost of production, while a majority of non-exporting firms (57%) reported that their cost of production did not decrease as the result of innovation.

Figure 4.2a: 70% of exporting firms revealed that their cost of production decreased as the result of innovation

Did your cost of production decreased a the result of innovation?

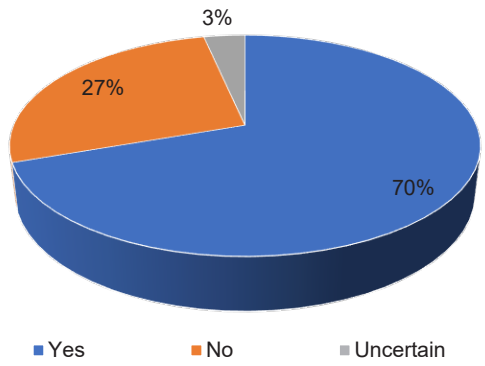
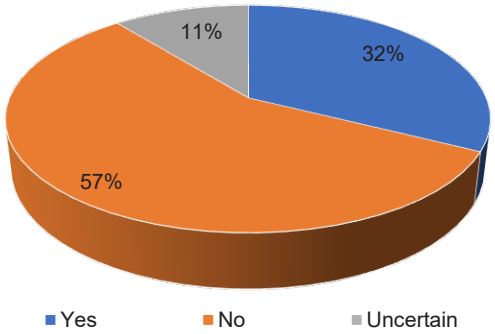


Figure 4.2b: Only 32% of non-exporting firms revealed that their cost of production de3creased as the result of innovation

Did your cost of production reduce as the result of innovation?



4.3 Impact on the Quality of Output

When asked about the impact of firm level innovations on firm's quality of output, 94% of percentage of exporting firms claimed that their quality of output improved as the result of innovation, as compared to 62% of non-exporting firms who experienced an improvement in their quality of output as the result of innovation.

Figure 4.3b: 62% of non-exporting firms said that their quality of their product improved as the result of innovation

Did the quality of your product increase as the result of innovation?

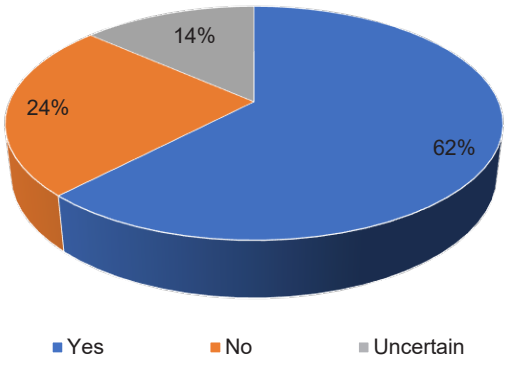
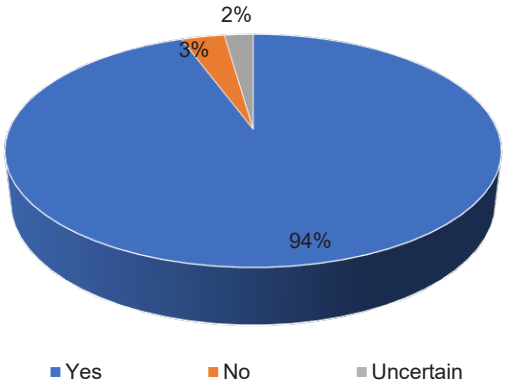


Figure 4.3a: 94% of exporting firms said that their quality of output improved as the result of innovation?

Did your quality of output increase as the result of innovation?



4.4 Impact on Prices

When asked if innovation resulted in lower product prices, only 14% of exporting firms said yes, they lowered their prices and 8% of non-exporting firms said that they lowered their prices as the result of innovation.

Figure 4.4a: Only 14% of exporting firms said that they lowered their prices as a result of innovation

Did you lower prices as the result of innovation?

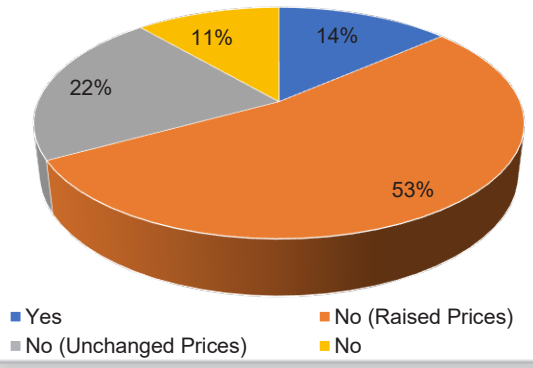
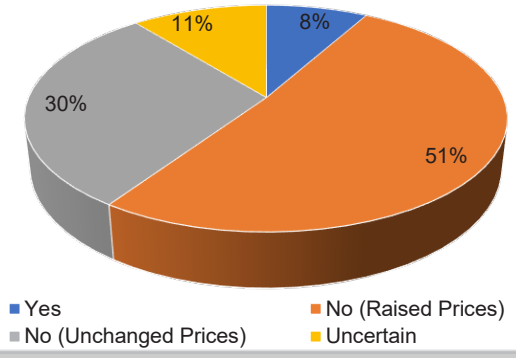


Figure 4.4b: Only 8% of non-exporting firms said that they lowered their prices as a result of innovation

Did you lower prices as the result of innovation?



4.5 Need to Retrain Employees

When asked if the firms had to retrain their employees as the result of innovation, 74% of exporting firms and 92% of non-exporting firms in the sample reported that they had to retrain their employees as the result of innovation.

Figure 4.5a: 74% of exporting firms said that they had to retrain their employees a the result of innovation

Did your employees have to be retrained as the result of innovation?

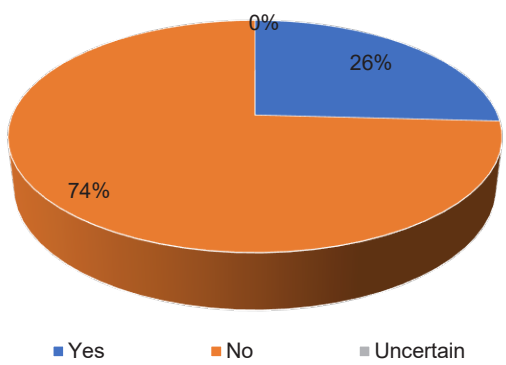
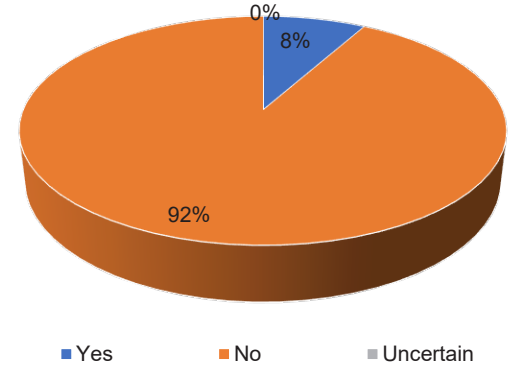


Figure 4.5b: Only 8% of non-exporting firms said that they had to retrain employees as the result of innovation

Did you have to retrain employees in order to adopt new innovations?



4.6 Resistance from Employees While Introducing Innovation

When firms were asked if they faced any resistance from their employees while trying to introduce innovations, 88% of exporting and 92% of non-exporting firms reported that they did face resistance from their employees while trying to introduce innovations in their firms.

Figure 4.6a: 88% of exporting firms said that they faced resistance from employees as a result of innovation

Did you face resistance from employees while trying to introduce innovation?

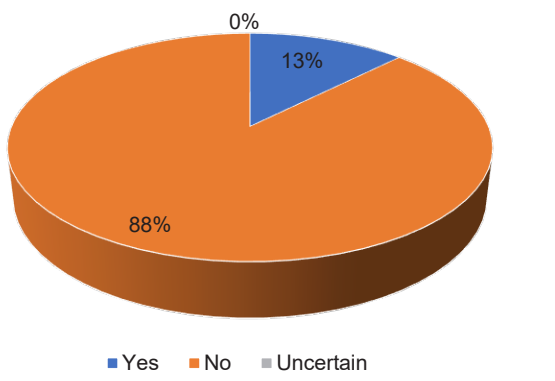
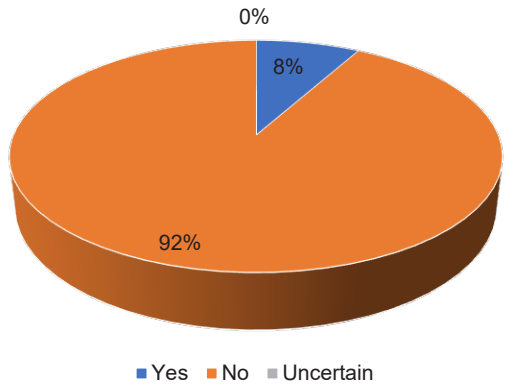


Figure 4.6b: Only 8% of non-exporting firms said that they faced resistance from their employees as a result of innovation

Did you face resistance from your employees when tried to introduce new innovation?



5. IMPACT OF DIFFERENT TYPES OF INNOVATIONS ON FIRM PROFITS

In this section of the survey, the innovating firms were asked how different types of innovations in product, process, technology, marketing and business model had the greatest impact on their profitability.

When asked about the impact of various types of innovations on firm profits, a majority of exporting firms reported that product innovation (56%) and technological innovation (34%) resulted in higher profits. Similarly, for non-exporting firms, product innovation in product (54%) and technological innovation (16%) resulted in higher profits.

Figure 5a: Product innovation (56%), followed by innovation in technology/ equipment (34%) led to the greatest increase in profitability for exporting firms

Which innovations had most impact on firm's profitability over the last 3 years?

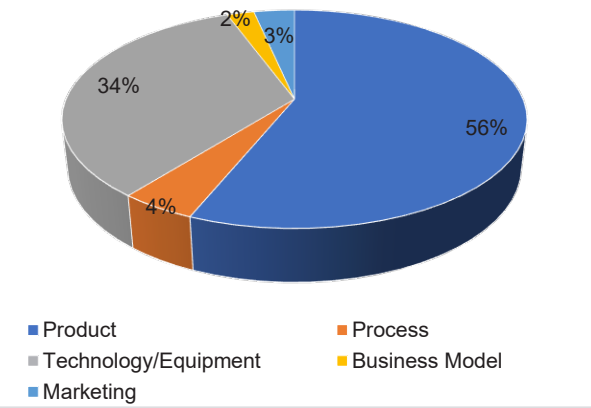
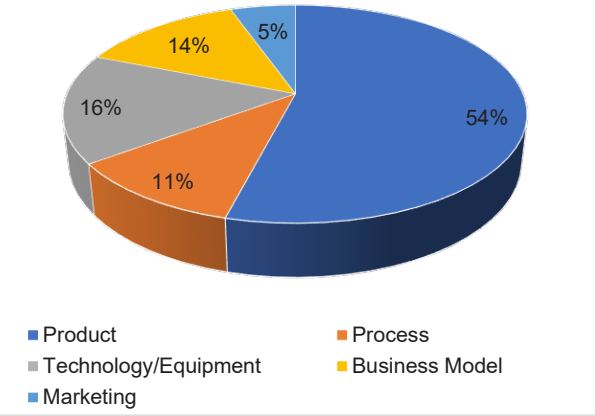


Figure 5b: Product Innovation (54%) led to the greatest increase in profitability for non-exporting firms

Which innovations had most impact on firm's profitability over the last 3 years?



6. CONCLUSION

The Innovation and Technology Centre (ITC) of the Lahore School of Economics conducted a survey in 2018/2019 to observe the growing trends in innovation and technology upgradation in the exporting and non-exporting firms from the textile and readymade garment sectors in Lahore. The purpose of this survey was to observe the extent, quality and impact of innovation activities on the performance and profitability of the innovating exporting and non-exporting firms. The survey also looked at the barriers faced by the innovating exporting and non-exporting firms in this sector. The data consisted of 125 firms involved in manufacturing readymade garments and other textiles, including 87 exporting and 38 non-exporting firms, collected during the period of September 2018 to December 2018. In the surveyed exporting firms, 40% of those firms were selling 100% of their output abroad, with majority of them exporting to Europe followed by worldwide.

Data analysis of surveyed firms revealed that most of the exporting firms were large sized and non-exporting firms were small sized firms, with majority of them innovated i.e. purchased new machinery/equipment. However, when asked whether those firms were planning to innovate in the next 12 months, a majority of exporting firms were planning to innovate and a majority of non-exporting firms were not planning to innovate again in the next 12 months. Looking at the vintage of technologies, a majority of exporting firms innovated more recently during the last 1-5 years while the majority of non-exporting firms innovated between 5-10 years ago. Also, the data revealed that a greater percentage of exporting firms had purchased their last 4 innovations from abroad as compared to non-exporting firms. A majority of exporting firms said that the major source of funding for their innovations related activities was utilizing their own internal resources (Equity) and loans from banks/financial institutions, while a majority of non-exporting firms utilized their internal resources (equity funds) to fund their innovation activities. The data also revealed that a large number of both exporting and non-exporting firms innovated in the areas of product and marketing.

When asked about the impact of various types of innovations on firm profits, a majority of both exporting and non-exporting firms reported that innovation in products resulted in higher profits followed by innovation in technology/equipment.

The incentives to innovate are particularly important for firms. In our survey, when asked about the most significant factor driving innovation in their industry, a majority of exporting and non-exporting firms reported pressure to increase quality was one of the most significant drivers of innovation.

Looking at the results of innovation, most of surveyed exporting firms revealed that their revenues increased, cost of production decreased, quality of products improved as the result of innovation. Whereas, a majority of both exporting and non-exporting firms reported that they didn't have to retrain their employees and did not face resistance from the employees as the result of innovation. Moreover, both exporting and non-exporting firms did not have to reduce their prices as the result of innovation.

The two greatest barriers faced by both exporting and non-exporting while trying to perform innovation were lack of financing and lack of innovation opportunities. Thus, it can be concluded that more incentives for innovations could be given by providing more sources of funding for the innovating firms in the form of aid from the government and with the assistance of financial institutions.

Lahore School of Economics

Innovation & Technology Centre

INNOVATION IN THE TEXTILE SECTOR OF LAHORE DIFFERENCES BETWEEN EXPORTERS AND NON-EXPORTERS

2021

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