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# Entrepreneurial Propensity in Pakistan and UK: A comparative study of Pakistani and UK Prospective Teachers

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**Abstract**

This research compares entrepreneurial inclination of Pakistani and UK primary level prospective teachers (B.Ed. students). Factor analysis revealed entrepreneurial intentions, instrumental readiness and self-efficacy as three common factors among both the data sets. Both the groups of respondents were also compared on five conceptual variables namely locus of control, self efficacy, entrepreneurial intentions, instrumental readiness and subjective norms. The prospective teachers from UK were found to be significantly lower on instrumental readiness and entrepreneurial intentions than their Pakistani counterparts. There were some partial impacts of demographic variables on entrepreneurial propensity of both the groups of respondents. Some implications for planning and policy were outlined.

**Keywords**: University, Survey, Entrepreneurial inclinations, Prospective teachers, Teacher training.

## 1. Introduction

Entrepreneurs are vital for the growth of economies (Louw et al., 2003). They have significant share in national development (Reimers-Hild, King, Foster, Fritz, Waller and Wheeler, 2005). Dickson, Solomon and Weaver (2008) found that education plays a key role in developing entrepreneurs. It promotes innovativeness, creativity, questioning style, commitment, teamwork, flexibility and other entrepreneurial skills and attitudes (Cheung, 2008, Haftendorn and Salzano, 2003).

A teacher is the main agent of education who develops the students into entrepreneurs (Birdthistle, Hynes and Fleming, 2007, Henderson and Robertson, 2000 and Lesko, 2006). S/he equips them with the knowledge and skills to plan, develop, start and run their own business and behaves as a role model, consultant and trader (Blenker, Dreisler and Kjeldsen, 2006 , Fiet, 2000, Garavan and Cinneide 1994 and Miller,2002). Under the direction of teachers students work like a true businessman and by the end of school years they start earning (Krugh,2002). Hence teacher is a basic part of entrepreneurial setting (Choudhary, Myers, Nystrom and Gokhale, 2007, Haftendorn and Salzano, 2003, Mason and Terrence, 1999).

Haftendorn and Salzano (2003) noted that the professionally competent teachers were essential for the development of enterprising personalities. Thus, there is a need to know existing entrepreneurial competence level of prospective teachers and enhance it through teacher training activities (Stoltenberg's 2nd Government Ministries, 2008). This article compares the entrepreneurial inclination of prospective teachers in Scotland (UK) and Pakistan.

In Scotland the future health of national economy is strongly linked with the learning at educational institutions. Schools are preparing students for contribution to the national economy. Both teachers and students learn work related skills (Fagan,2007). Entrepreneurial skills have been embedded in curriculum. It has also been made the part of teacher education programs (Fagan,2007). According to the policy documents economic understanding and awareness is compulsory for all Scottish teachers and students.

## 2. Situation in Pakistan

Rahman (2008), the former Chairman of Higher Education Commission pointed out the lack of entrepreneurial learning at Pakistani educational institutes. Majority of the Pakistani students remain deficient in problem solving abilities, critical thinking, self efficacy and risk taking propensity (Hussain, 2008). None of the teacher training institution offers an independent course on entrepreneurship (Higher Education Commission, 2008b). However, the serious socioeconomic crisis has increased demand for Pakistani institutions to promote a culture of entrepreneurship among students, faculty and staff (Mian, 2006). At present entrepreneurial thinking has taken precedence at policy level.

## 3. Methodology

### *3.1 Sampling*

Two Universities, one each from both Scotland and Pakistan, that have B.Ed. programme on the offer list consented to participate in the study. Probability sampling was exercised to select equal number of participants (200 each) from the B.Ed. programmes of both the institutions. There were equal and independent opportunities for the respondents to participate in the study. The participation was voluntary. The consequent sample consisted of 400 students.

### *3.2 Questionnaire*

The questionnaire was adapted from Ramayah and Harren (2005) 7-point agree-disagree Likert type scale for assessing entrepreneurial intention among the potential entrepreneurs of University Sains Malaysia. This scale was largely concerned with need

for achievement, locus of control, self efficacy, instrumental readiness, subjective norms and entrepreneurial intentions. The reported reliability value for the scale was 0.85.

Both the language and content of the items were modified. An eight point Likert scale with strongly disagree and strongly agree labels on respective points one and eight was used for recording the responses. According to Boone (1997) and Fletcher (2002), the tendency to pick the neutral response in such inventories is more common in Asian cultures. The neutral option therefore needed to be eliminated. The questionnaire was then translated into Urdu.

A panel of two experts was requested to consider the content validity and face validity of the instruments in both the languages. The final questionnaire consequently consisted of 45 items. These items deal with the following five conceptual variables: self-efficacy (item numbers 7,16,17,22,24,26,27,28,31,32,33,36,37,40), entrepreneurial intentions (item numbers 15,20,21,23,25,26,29,34,35,38), locus of control (item numbers 8,10,12,13,30), subjective norms (5,6,9,11) and instrumental readiness (14,18,19, 39). A Cronbach alpha of .88 indicated high reliability. The questionnaire was then piloted on a sample of 30 prospective teachers, 15 each from UK and Pakistan. This led to some further adaptations. The Urdu and the English versions of the questionnaire were subsequently used together in Pakistan and only English in Dundee for data collection.

*3.3 Response Rate and Analysis*

The participants were approached at their respective universities. The teachers gave access to the classrooms. Two hundred respondents from each university received the questionnaires. A total of 295 prospective teachers, 154 (77%) Scottish and 141 (70%) Pakistani prospective teachers returned the completed questionnaires. The overall response rate was thus 74%. Altogether 76% of the respondents consisted of female students. Ninety one percent females represented Scottish University whereas 61% females participated from Pakistani side. This indicates the presence of the large number of female students in the B.Ed. programmes of both the universities.

An exploratory factor analysis was conducted on both the data sets. Then descriptive and inferential statistical techniques were applied to the data. Finally perceptions on the conceptual variables of locus of control, self efficacy, subjective norms, instrumental readiness and entrepreneurial intention were analyzed.

## 4. Empirical Results

*4.1 Factor Analysis*

To identify underlying factors of entrepreneurial inclination a Principal Components Analysis followed by Varimax rotation was conducted for both the data sets. Kaiser Mayer-Olkin Measure of Sampling Adequacy, Bartlett Test of Sphericity, and Anti-image Correlation were calculated. A (.88) high value of Kaiser Mayer-Olkin Measure of Sampling Adequacy for Scottish and the whole data set and .73 for Pakistani responses, highly significant Bartlett Test of Sphericity in both the cases (overall Chi Square 1828.398; Significance $p<0.000$) and less than -.1 value of the Anti-image correlation show normal behaviour of the data. A three-factor solution was reached. This accounted for 56.743% common variance (Table 1). The overall factor structure was more similar to the Dundee data set than the Pakistani one.

**Table 1: Factor Matrix of Entrepreneurial Inclinations of the Scottish and Pakistani Prospective Teach**

| Factor No. | Attitudes | Q.No | Items | Factor Loadings | Variance Explained |
|---|---|---|---|---|---|
| 1 | Entrepreneurial Intentions | 15 | I would prefer to be self-employed and independent, rather than work for others | .626 | 21.107% |
| | | 21 | It is important to teach students about entrepreneurship and starting a business | .662 | |
| | | 25 | I would prefer to have my own successful business than to be in a secure and well paid job | .695 | |
| | | 29 | A comprehensive unit on how to run a business would be a useful course for me | .539 | |
| | | 35 | I would seriously consider starting my own business if I could be taught how to do it | .717 | |
| | | 38 | Running my own business would be more prestigious than working for others | .768 | |
| 2 | Instrumental Readiness | 9 | I believe that my closest family thinks that I should pursue a career as an entrepreneur | .604 | 20.939% |
| | | 14 | I have access to supporting information to start being an entrepreneur | .755 | |
| | | 18 | I have access to capital to start being an entrepreneur | .786 | |
| | | 19 | I believe that people who are important to me think that I should pursue a career as an entrepreneur | .693 | |
| | | 34 | I have seriously considered starting my own business sometimes after graduate | .732 | |
| 3 | Self-efficacy | 31 | I set goals for myself in order to direct my activities | .687 | 14.697% |
| | | 32 | Working hard is something I like doing | .704 | |
| | | 33 | When confronted with a problem I can usually find several solutions | .767 | |
| | | 36 | I like the opportunity to come up with innovative solutions to problems | .530 | |
| | | 37 | When working in group I prefer being a leader rather than a follower | .553 | |
| Total Variance Explained | | | | | 56.743% |

| | |
|---|---|
| Rotation Varimax | |
| Cronbach Alpha for total scale | .883 |
| Cronbach Alpha Reliability for individual scales | .848, .844, .795 |
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | .888 |
| Bartlet Test of Sphericity | 1828.398 |
| df | 120 |
| Sig. | .000 |
| Convergent Validity in the entire individual subscales | 100% |
| Overall Convergent validity | 84% |
| Overall Discriminant Validity | 16% |
| Anti Image Correlation | Less than -.1 |

On the whole the six (15,21,25,29,35,38), five (9,14,18,19,34) and five (31,32,33,36,37) items, loaded respectively on entrepreneurial intentions, instrumental readiness and self-efficacy (Table 1).

In all the cases the measuring instrument had more than 80% content validity. Convergent validity of all the factors reaches to 84%. Overall Discriminant validity of the questionnaire was calculated as 16%, a satisfactorily low figure. Reliability of the measuring instrument was no less than .775. The reliability of all the subscales of the research tool was more than .731.

*4.2 Descriptive and Statistical Analysis*

The opinion of the prospective teachers on entrepreneurial intentions, instrumental readiness and self-efficacy were calculated by weighting the responses according to the position in which they occurred (e.g. a response of 8 in the strongly agree direction was considered as 8, not as 1, and so forth) and then summed by adding up the resultant frequency of items under each subscale and calculating the disagree and the agree frequencies, with the percentage of the responses within each category. Responses from 1-4 points indicate disagree category, whereas the responses on scale points 5-8 were treated as agree perceptions. These were summed and divided into disagree and agree categories. In order to make comparisons between the perceptions of the Scottish and the Pakistani respondents item and the variable wise net scores were calculated by subtracting disagree from agree sets of responses. Paired sample t-tests were employed to test the significance of the difference between the disagree versus agree and the Scottish versus Pakistani sets of perceptions. The results are given in the form of tables and interpreted in terms of disagree and agree percentages.

**Table 2: Entrepreneurial Inclinations of Prospective Teachers at Scotland and Pakistan**

| **Factors** | **F** | **Disagree Scottish %** | **F** | **Disagree Pakistani %** | **F** | **Agree Scottish %** | **F** | **Agree Pakistani %** | **Total Scottish Frequency** | **Total Pakistani Frequency** |
|---|---|---|---|---|---|---|---|---|---|---|
| Entrepreneurial Intentions | 1424 | 46.55% | 730 | 15.32% | 1635 | 53.44% | 4035 | 84.67% | 3059 (211) | 4765 (3305) |
| Instrumental Readiness | 1201 | 71.74% | 822 | 26.23% | 473 | 28.25% | 2311 | 73.76% | 1674 (-728) | 3133 (1489) |
| Self-efficacy | 795 | 18.77% | 439 | 10.27% | 3440 | 81.22% | 3834 | 89.72% | 4235 (2645) | 4273 (3395) |
| Overall inclinations | 3420 | 45.68% | 1991 | 17.27% | 5548 | 54.30% | 10180 | 82.71% | 8968 | 12171 |
| Weighted Paired sample 't' test | Scottish Mean 709.33 Standard Deviation 1740.84 | | | | Pakistani 't' -2.955 Mean 2729.66 Standard Deviation 1075.39 | | | | df 2 Sig. .098 | |

*4.3 Entrepreneurial Intent at Pakistani and Scottish Universities*

Regarding table 2, 53% Scottish and 85% Pakistani participants showed entrepreneurial intentions. Both the groups of respondents were found more or less similar at the self-efficacy as above 81% respondents indicated their confidence on the possession of necessary entrepreneurial skills. Twenty three percent Scottish and 74% Pakistani respondents were positive on entrepreneurial l instrumental readiness. In total 54% Scottish and 82% Pakistani respondents revealed entrepreneurial attitude. Paired sample 't' test indicated no significant difference between the Scottish and the Pakistani responses ( Scottish Mean 703.33, Scottish Standard Deviation 1740.84, Pakistani Mean 2779.66, Pakistani Standard Deviation 1075.39, 't' -2.955, df 2, Sig. .098).

Likewise the responses on the conceptual variables locus of control, self efficacy, instrumental readiness, subjective norms and entrepreneurial intentions were weighted by the position in which they occurred (e.g. a response of 8 in the strongly agree direction was considered as 8, not as 1, and so forth). These were summed and divided into disagree and agree groups. The scale points 1-4 and 5-8 were respectively considered as disagree and agree perceptions. Then disagree perceptions were subtracted from agree sets of responses to calculate net perception for both Scottish and Pakistani samples. Paired sample t-tests were employed to test the significance of the difference between the disagree and agree sets of perceptions between the samples. The results are given in the form of tables and interpreted in terms of disagree and agree percentages.

*4.4 Locus of Control*

Five items related to locus of control (Forthcoming Table 3). The first question, 'sometimes I feel that I don't have enough control over the direction my life is taking' was couched in a negative form (positive response indicating low locus of control). In Pakistani sample there was a high positive response to this item however, the Scottish respondents supported the statement with marginal difference. The remaining four items were couched in a positive form (positive response indicating high locus of control), and there were highly positive responses to these items. In both the cases the overall picture was thus of a generally positive response in locus of control.

According to Table 3, 51% Scottish and 76% Pakistani responses revealed that more than half Scottish and bulk of Pakistani prospective teachers didn't have enough control over the direction of their life. In both the cases more than 67% participants believed that their misfortune was associated with their mistakes. Regarding the role of luck in success 75% Scottish and 59% Pakistani responses indicate that there was no impact of fortune on the achievements. It was obvious from more than 87% positive responses that the prospective teachers were highly certain that they would accomplish their plans as they link their success with hard work. In total more than 75% of the prospective teachers indicated internal locus of control. There was no significant difference between the net responses of both the samples.

**Table 3: Locus of Control of Prospective Teachers in Scotland and Pakistan**

| Item # | Items | F | Disagree Scottish % | F | Disagree Pakistani % | F | Agree Scottish % | F | Agree Pakistani % | Total Scottish Frequency | Total Pakistani Frequency |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | Sometimes I feel that I don't have enough control over the direction my life is taking | 262 | 49.34% | 166 | 23.28 % | 269 | 50.65% | 547 | 76.71% | 531 (7) | 713 (381) |
| 10 | My misfortune results from the mistakes I make | 220 | 33.03% | 139 | 25.22 % | 446 | 66.96% | 412 | 74.77% | 666 (226) | 551 (273) |
| 12 | In my case getting what I want has nothing to do with luck | 193 | 24.61% | 191 | 41.43 % | 591 | 75.38% | 270 | 58.56% | 784 (398) | 461 (79) |
| 13 | When I make plans, I am almost certain that I can make them work | 83 | 10.45% | 95 | 12.73 % | 711 | 89.54% | 651 | 87.26% | 794 (628) | 746 (556) |
| 30 | There is a direct connection between how hard I study and the grades I get | 64 | 6.39% | 80 | 8.97% | 937 | 93.60% | 811 | 91.02% | 1001 (873) | 891 (731) |
| | Overall Locus of Control | 822 | 24.76% | 703 | 22.32 % | 2954 | 75.22% | 2691 | 77.64% | 3776 | 3362 |
| Paired Sample 't' test | | Scottish Mean 426.40 Standard Deviation 339.99 | | | | | Pakistani Mean 404 Standard Deviation 251.66 | | | 't' .194 df 4 Sig. .856 | |

* Entries in ( ) indicate agree-disagree scores for both the samples

**Table 4: Self-efficacy Level of Prospective Teachers in Scotland and Pakistan**

| Item # | Items | F | Disagree Scottish % | F | Disagree Pakistani % | F | Agree Scottish % | F | Agree Pakistani % | Total Scottish Frequency | Total Pakistani Frequency |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7 | I am good at handling unforeseen situations | 95 | 10.49 | 124 | 18.84 | 810 | 89.50 | 534 | 81.55 | 905 (715) | 658 (410) |
| 16 | I prefer a logical approach in decision-making | 104 | 11.75 | 137 | 19.21 | 781 | 88.24 | 576 | 80.78 | 885 (472) | 713 (439) |
| 17 | I am more efficient because I do more work in less time | 271 | 40.93 | 158 | 23.86 | 367 | 57.52 | 504 | 76.13 | 638 (346) | 662 (346) |
| 22 | I remain calm when facing difficulties | 139 | 17.09 | 121 | 17.11 | 674 | 82.90 | 586 | 82.88 | 813 (465) | 707 (465) |
| 24 | I am generally happy with the status quo | 168 | 22.07 | 174 | 28.90 | 593 | 77.92 | 428 | 71.09 | 761 (260) | 602 (254) |
| 26 | I feel that the risks and insecurities associated with being in business are acceptable | 258 | 41.34 | 133 | 18.02 | 366 | 58.65 | 605 | 81.97 | 624 (347) | 738 (472) |
| 27 | I closely monitor areas where I know I need more practice | 107 | 12.29 | 91 | 11.22 | 763 | 87.70 | 720 | 88.77 | 870 (613) | 811 (629) |
| 28 | I like to take calculated risks with new ideas | 217 | 29.97 | 92 | 11.38 | 507 | 70.02 | 716 | 88.61 | 724 (499) | 808 (624) |
| 31 | I set goals for myself in order to direct my activities | 82 | 8.82 | 66 | 7.08 | 847 | 91.17 | 865 | 92.81 | 929 (783) | 932 (799) |
| 32 | Working hard is something I like doing | 95 | 10.80 | 80 | 9.14 | 784 | 89.19 | 795 | 90.85 | 879 (700) | 875 (715) |
| 33 | When confronted with a problem I can usually find several solutions | 99 | 11.74 | 100 | 12% | 744 | 88.25 | 734 | 88% | 843 (635) | 834 (634) |
| 36 | I like the opportunity to come up with innovative solutions to problems | 215 | 29.57 | 83 | 10.37 | 512 | 70.42 | 717 | 89.62 | 727 (502) | 800 (634) |
| 37 | When working in group I prefer being a leader rather than a follower | 178 | 23.20 | 95 | 11.29 | 589 | 76.79 | 746 | 88.70 | 767 (568) | 841 (651) |
| 40 | I look forward to return to work when I am away from my work | 186 | 29.19 | 112 | 13.93 | 451 | 70.80 | 692 | 86.06 | 637 (506) | 804 (580) |
| Overall Self efficacy | | 2214 | 21.36 | 1442 | 13.82 | 8788 | 73.21 | 9218 | 84.84 | 11002 | 10785 |

| Paired Sample 't' test | Scottish | Pakistani | 't'-.596 |
|---|---|---|---|
| | Mean 529.35 | Mean 546.57 | df 13 |
| | Standard Deviation 151.05 | Standard Deviation 152.02 | Sig .561 |

* Entries in ( ) indicate agree-disagree scores for both the samples

*4.5 Self-efficacy*

Fourteen items related to self-efficacy (Table 4). All the questions were couched in a positive manner (positive response indicating high self-efficacy). In both the cases, the difference between agree and disagree responses achieved high statistical significance in favor of agree responses. The overall picture was thus of a very positive response in self-efficacy.

More than 80% participants from both the data sets were good on handling unforeseen situation and preferred logical approach in making decisions. Regarding efficiency, 58% Scottish and 76% Pakistani prospective teachers were reported more efficient as they could do more work in less time. In both the cases, 83% participants face difficult situations with normal behavior. More than 71% respondents from both the universities liked status quo. Insecurities and business associated risks were acceptable to 59% Scottish and 82% Pakistani respondents. A wide majority of the Scottish and Pakistani prospective teachers (more than 70%) closely monitored the area where they needed more practice, liked to take calculated risks with new ideas, set goals for directing their activities, liked hard work, were good in problem solving, were innovative, preferred leadership roles and looked forward to return to work in case of being away from it. As a whole, 73% Scottish and 85% Pakistani respondents were positive in terms of self-efficacy. There was no significant difference between the responses of Scottish and Pakistani prospective teachers on this attribute.

Table 5: Instrumental Readiness of Prospective Teachers in Scotland and Pakistan

| Item # | Items | F | Disagree Scottish % | F | Disagree Pakisatani % | F | Agree Scottish % | F | Agree Pakistani % | Total Scottish Frequency | Total Pakistani Frequency |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 14 | I have access to supporting information to start being an entrepreneur | 258 | 65.64 | 147 | 21.81 | 135 | 34.35 | 527 | 78.18 | 393 (-123) | 674 (380) |
| 18 | I have access to capital to start being an entrepreneur | 228 | 75.24 | 167 | 27.42 | 75 | 24.75 | 442 | 72.57 | 303 (-153) | 609 (275) |
| 19 | I believe that people who are important to me think that I should pursue a career as an entrepreneur | 241 | 75.13 | 186 | 30.89 | 79 | 24.68 | 416 | 68.10 | 320 (-162) | 602 (230) |
| 39 | I have good social networks that can be utilized when I decide to be an entrepreneur | 263 | 45.11 | 166 | 25 | 320 | 54.88 | 498 | 75 | 583 (57) | 664 (332) |
| Overall Instrumental Readiness | | 990 | 65.28 | 666 | 27.02 | 609 | 34.66 | 1883 | 73.46 | 1499 | 2549 |
| Paired Sample 't' test | | Scottish Mean -95.25 Standard Deviation 102.86 | | | | Pakistani Mean 304.25 Standard Deviation 65.51 | | | | 't' -8.410 df 3 Sig. .004 | |

* Entries in ( ) indicate agree-disagree scores for both the samples

*4.6 Instrumental Readiness*

Four items are related to instrumental readiness (Table 5). All the questions were couched in a positive way (positive response indicating high instrumental readiness). In the Pakistani sample there were very positive responses to all the four items. The Scottish prospective teachers responded negatively on three items. They were positive with marginal difference on having good social networks that can be utilized when they decide to be entrepreneurs. The overall picture was significantly different in both the samples. There was a high positive response on instrumental readiness in Pakistani and high negative picture in the Scottish data sets.

Thirty four percent Scottish and 78% Pakistani responses indicated that the access to supporting information necessary for entrepreneurial activity was very low in Scottish but very high in Pakistani samples. Twenty five percent Scottish and 73% Pakistani respondents were positive in term of the access to capital. Twenty five percent Scottish and 68% Pakistani people whom the relevant group of the prospective teachers' value more wished them to be entrepreneurs. The prospective teachers in both the samples were found positive on having good social networks that might be helpful for any future entrepreneurial activity as perceived by 55% Scottish and 75% Pakistani participants. Overall 35% Scottish and 73% Pakistani Prospective teachers had instrumental readiness for entrepreneurship. There was a significant difference between the perceptions of the Scottish and Pakistani prospective teachers on instrumental readiness in favor of Pakistani participants (Instrumental readiness Scottish Mean 95.25, Standard Deviation 102.86, Pakistani Mean 304.25, standard Deviation 65.51, 't' 8.410, Sig. .004).

**Table 6: Subjective Norms of Prospective Teachers in Scotland and Pakistan**

| Item # | Items | F | Disagree Scottish % | F | Disagree Pakisatani % | F | Agree Scottish % | F | Agree Pakistani % | Total Scottish Frequency | Total Pakistani Frequency |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | I believe that my closest friends think that I should pursue a career as an entrepreneur | 261 | 74.47% | 132 | 23.19% | 88 | 25.21 % | 437 | 76.80 % | 349 (-173) | 569 (305) |
| 6 | I do not care what people who are important to me think if I decide to be an entrepreneur | 252 | 43.59% | 157 | 28.75% | 326 | 56.40 % | 389 | 71.24 % | 578 (137) | 546 (421) |
| 9 | I believe that my closest family thinks that I should pursue a career as an entrepreneur | 263 | 80.18% | 175 | 29.11% | 65 | 19.81 % | 426 | 70.88 % | 328 (-198) | 601 (153) |
| 11 | I do not care what my closest friends think if I decide to be an entrepreneur | 249 | 39.84% | 192 | 32.98% | 376 | 60.16 % | 390 | 67.01 % | 625 (184) | 582 (198) |
| Overall Subjective Norms | | 1025 | 59.52% | 656 | 28.50% | 855 | 40.39 % | 1642 | 71.48 % | 1880 | 2298 |
| Paired Sample 't' test | | Scottish Mean -12.5 Standard Deviation 200.94 | | | | Pakistani Mean 269.25 Standard Deviation 119.57 | | | | 't' -2.878 df 3 Sig. .064 | |

* Entries in ( ) indicate agree-disagree scores for both the samples

*4.7 Subjective Norms*

Four items related to subjective norms (Table 6). All questions were couched in a positive form (positive response indicating high subjective norms). There were positive responses to all the items in Pakistani data set. The Scottish sample negatively perceived two out of four items concerning the effects of the closest family and friends on the entrepreneurial inclinations of prospective teachers. There was no significant difference between the perceptions of both the samples on subjective norms.

The closest friends of 25% Scottish and 77% Pakistani prospective teachers wished them to be an entrepreneur in future. The closest family of 20% Scottish and 71% Pakistani respondents exhibited entrepreneurial wish for the respective participants. More than 56% Scottish and 67% Pakistani respondents would not care about the aspiration of their

closest family and friends in deciding upon their entrepreneurial career. Altogether 40% Scottish and 71% Pakistani Prospective teachers had positive perceptions about subjective norms. There was no significant difference between the perceptions of both the samples on subjective norms.

**Table 7: Entrepreneurial Intentions of Prospective Teachers in Scotland and Pakistan**

| Item # | Items | F | Disagree Scottish % | F | Disagree Pakistani % | F | Agree Scottish % | F | Agree Pakistani % | Total Scottish Frequency | Total Pakistani Frequency |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 15 | I would prefer to be self-employed and independent, rather than work for others | 264 | 52.80 % | 89 | 14.21 % | 236 | 47.20 % | 537 | 85.78 % | 500 (-28) | 626 (448) |
| 20 | I would seriously consider starting my own business if I can't find a job | 238 | 42.65 % | 135 | 19.31 % | 320 | 57.34 % | 564 | 80.68 % | 558 (82) | 699 (429) |
| 21 | It is important to teach students about entrepreneurship and starting a business | 178 | 24.05 % | 76 | 8.40 % | 562 | 75.94 % | 828 | 91.59 % | 740 (384) | 904 (752) |
| 23 | I am likely to make more money running my own business than working for others | 264 | 46.23 % | 210 | 36.90 % | 307 | 53.76 % | 359 | 63.09 % | 571 (43) | 569 (149) |
| 25 | I would prefer to have my own successful business than to be in a secure and well paid job | 255 | 56.91 % | 147 | 20.13 % | 193 | 43.08 % | 583 | 79.86 % | 448 (-62) | 730 (436) |
| 26 | I feel that the risks and insecurities associated with being in business are acceptable | 258 | 41.34 % | 133 | 18.02 % | 366 | 58.65 % | 605 | 81.97 % | 624 (108) | 738 (472) |
| 29 | A comprehensive unit on how to run a business would be a useful course for me | 251 | 61.97 % | 152 | 22.58 % | 154 | 38.02 % | 521 | 77.41 % | 405 (-97) | 673 (369) |
| 34 | I have seriously considered starting my own business sometimes after graduate | 209 | 63.71 % | 147 | 29.40 % | 119 | 36.28 % | 500 | 77.27 % | 328 (-90) | 647 (353) |
| 35 | I would seriously consider starting my own business if I could be taught how to do it | 240 | 53.45 % | 166 | 24.41 % | 209 | 46.54 % | 514 | 75.58 % | 449 (-31) | 680 (348) |
| 38 | Running my own business would be more prestigious than working for others | 236 | 45.64 % | 118 | 14.21 % | 281 | 54.35 % | 712 | 85.78 % | 517 (45) | 830 (594) |
| Overall Entrepreneurial Intention | | 2393 | 48.87 % | 1773 | 20.75 % | 2747 | 51.11 % | 5723 | 79.90 % | 5140 | 7096 |
| Paired Sample 't' test | | Scottish Mean 35.40 Standard Deviation 141.53 | | | | Pakistani Mean 435 Standard Deviation 159.09 | | | | 't' -10.288 df 9 Sig. .000 | |

* Entries in ( ) indicate agree-disagree scores for both the samples

*4.8 Entrepreneurial Intentions*

Ten items related to entrepreneurial intentions (Table 7). All questions were couched in a positive form (positive response indicating high entrepreneurial intention). In Pakistani sample there was positive response to all the items whereas the five items were negatively perceived by the Scottish participants. In Scotland the prospective teachers wished to attend a course on entrepreneurship, ready to take risks, put entrepreneurial career after job and wanted to earn more money through business. Among both the groups the entrepreneurial intention was significantly higher in Pakistani prospective teachers.

More than 43% Scottish and 75% Pakistani prospective teachers wanted to seek independence through self employment, liked to have their own successful business and were seriously contemplating setting up a business if properly trained. Above 54% Scottish and over 75% Pakistani respondents considered running successful business more prestigious than working for others, showing readiness to accept business associated insecurities and risks and would seriously consider starting their business in case of inability to find employment. In both the cases more than 76% participants demanded to teach students about entrepreneurship and starting a business. Fifty four percent Scottish and 63% Pakistani prospective teachers were likely to make more money by running their own business than working for others. 'A comprehensive unit on how to run a business would be a useful course for me' as exhibited by 38% Scottish and 77% Pakistani respondents. Regarding entrepreneurial intention 36% Scottish and 77% Pakistani participants viewed that they would seriously consider starting their own business after graduation In total 51% Scottish and 80% Pakistani prospective teachers were positive in term of entrepreneurial intentions. There was a significant difference between the entrepreneurial inclinations of both the groups of participants in favour of Pakistani prospective teachers ( entrepreneurial inclinations Scottish Mean 35.44, Standard Deviation 141.53, Pakistani Mean 435, Standard Deviation 159.09, 't' -10.88, df 9, sig. .000).

**Table 8: Entrepreneurial Inclinations of Prospective Teachers in Scotland and Pakistan**

| Attributes | F | Disagree Scottish % | F | Disagree Pakistani % | F | Agree Scottish % | F | Agree Pakistani % | Total Scottish Frequency | Total Pakistani Frequency |
|---|---|---|---|---|---|---|---|---|---|---|
| Locus of control | 828 | 24.76 % | 703 | 22.32 % | 2954 | 75.22 % | 2691 | 77.64% | 3776 (2126) | 3362 (1988) |
| Self efficacy | 2214 | 21.36 % | 1442 | 13.82 % | 8788 | 73.21 % | 9218 | 84.84% | 11002 (6574) | 10785 (7776) |
| Instrumental Readiness | 990 | 65.28 % | 666 | 27.02 % | 609 | 34.66 | 1883 | 73.46% | 1499 (-381) | 2549 (1217) |
| Subjective Norms | 1025 | 59.52 % | 656 | 28.50 % | 855 | 40.39 % | 1642 | 71.48% | 1880 (-170) | 2298 (986) |
| Entrepreneurial Intentions | 2393 | 48.87 % | 1773 | 20.75 % | 2747 | 51.11 % | 5723 | 79.90% | 5140 (354) | 7096 (3950) |
| Overall Entrepreneurial Inclinations | 7450 | 43.95 % | 5240 | 22.48 % | 15953 | 54.91 % | 21157 | 77.46% | 23297 | 26090 |
| Paired Sample 't' test | Scottish Mean 1700.60 Standard Deviation 2897.26 | | | | Pakistani Mean 3183.40 Standard Deviation 2819.74 | | | | 't' -2.456 df 4 Sig. .070 | |

* Entries in ( ) indicate agree-disagree scores for both the samples

*4.9 Overall Entrepreneurial Inclinations*

Combining all the five conceptual variables, more than 73% respondents from both the data sets revealed internal locus of control. More than 37% Scottish and 71% Pakistani respondents had positive perceptions on subjective norms. As a whole 54% Scottish and 77% Pakistani informants were inclined towards entrepreneurship. There was no significant difference between the entrepreneurial inclinations of both the groups.

*4.10 Demographic Effects*

Independent sample 't' test and one way ANOVA followed by Bonferroni as post hoc comparisons were employed to assess the effects of the demographic variables on the following conceptual variables in both the samples.

*4.11 Locus of control*

Scottish participants with higher qualification of their parents indicated high internal locus of control than those whose parents had lower qualification (Parents Education, University-Secondary Education, Mean difference .94649, F 3.335, df 148, sig. .019). Gender, class, parents occupation and income had no impact on the locus of control.

Pakistani results showed that female respondents stood at a higher level of internal locus of control than the male ones (Gender, Male Mean 5.8727, Female Mean 6.6047, 't' -2.149 df 139, sig. .033). The participants with secondary, college and university level qualification of their fathers had higher internal locus of control than those having illiterate fathers (Fathers' education, college-no education, Mean difference 2.17188, F 5.796, df 140, sig. .001). The prospective teachers whose fathers were either entrepreneurs or private sector employees had higher internal locus of control than those with retired and public sector employed fathers (Father occupation, Entrepreneur-public employee, Mean difference 1.79412, F 3.385, df 140, sig. .030, Entrepreneur-retired, Mean difference 2.07952, F 3.385, df 140, sig. .012). The respondents from rural areas exhibited higher internal locus of control than those from urban areas (Residence Rural Mean 3.7561, Urban Mean 2.7778, t 2.250, df 111, sig. .026). There was no effect of parents income level on this variable.

*4.12 Self-efficacy*

Pakistani male respondents were better at dealing with unforeseen situations (Male mean 5.3636, Female Mean 4.2209, t 2.839, df 139, sig. .005) . Those with highly qualified parents were better at dealing with unforeseen situations, prefer logical approach in making decisions, dealt with difficult situations with normal behaviour and set goals for directing their activities than their counterparts in low qualified parents group.( parents education, college-secondary, Mean difference 1.62366, F 3.166, df 140, sig. .009). The participants from retired, public or private sector employed fathers group had more hardworking, problem solving abilities and high tendency of dealing with difficult situations with normal behaviour than those with unemployed fathers (Father occupation, Retired-unemployed, Mean difference 3.18519, F 3.507, df 140, sig. .001),(public sector employed-unemployed, Mean difference 2.60504, F 3.695, df 139, sig. .027), (private sector employed-unemployed, Mean difference 2.58009, F 3.695, df 139, sig. .030). The prospective teachers from urban areas were better at self assessment, risk taking and problem solving abilities than their rural counterparts ( Rural mean 4.7317, Urban Mean 6.1096, t -3.206, df 112 sig. .002). There was no effect of income on the self-efficacy level of Pakistani respondents.

Scottish male respondents were more logical in making decisions and taking risks than their corresponding females (Male mean 6.3333, Female mean 5.1655, t 2.363, df 152, sig. .019). The prospective teachers whose fathers were associated with other professions had more leadership abilities than those having fathers employed in public sector ( Father occupation, other-public employee Mean difference 2.83333, F 2.826, df 145, sig. .026). There was no significant effect of class, residence, parents education and income on self-efficacy level of the Scottish respondents.

In both cases females were found to be more hard working than males (Male mean 4.1333, Female mean 5.9203, t -4.009, df 151, sig .000).

*4.13 Instrumental Readiness*

In Scotland there were greater aspirations for the male respondents to be future entrepreneurs than the female participants (Male mean 3.000, Female mean 1.9784, t 2.637 df 152, sig .009). The prospective teachers with over £10000 monthly income indicated more entrepreneurial instrumental readiness than their counterparts from £600-1000 and £2000-3000 income groups (Income, Over £ 10000-£600-1000, F 3.293, df 128, sig. .005). Residence, parents education and occupation had impact on instrumental readiness of the prospective teachers in Scotland.

Male prospective teachers from Pakistani sample had more access to supporting information and capital than female participants (Male mean 5.4364, Female mean 4.3605, t 2.728, df 139, sig .007). The respondents from higher qualified parents group had more access to supporting information and capital than their counterparts from the group of illiterate parents (Parents Education College-No education Mean difference 1.96008, F 3.340, df 140, sig .011). Similarly the prospective teachers whose fathers were employed in private sector had more capital and social network access than those having fathers in all the other occupations (Father occupation Private –retired Mean difference 2.51634, F 4.593, df 140, sig .002). Residence and parents income exhibited no impact on instrumental readiness of the prospective teachers in Pakistan.

*4.14 Subjective Norms*

The closest family of the Scottish respondents that had fathers with college level education exhibited stronger entrepreneurial wish for them than those whose fathers had secondary level education (Father Education, FE college- secondary Education, Mean difference 8.1159, F 3.699, df 148, sig. .018). Gender, class, mother education, fathers' occupation and residence had no impact on subjective norms in Scotland.

In Pakistan friends and relatives of male respondents liked them to be entrepreneurs more than those of the females (Male mean 4.8909, Female mean 3.4884, t 3.180, df 139, sig .002).The closest friends of the respondents whose fathers were employed in private sector had higher entrepreneurial wish than those whose fathers were retired (Father occupation Private- retired, Mean difference 2.77560, F 3.763, df 140, sig .001). Likewise higher entrepreneurial wish was indicated by the closest friends of the rural respondents than those of the urban participants (Rural mean 4.6585, Urban mean 3.5205, t 2.191, df 112, sig. .031). There was no significant impact of parents education and income on the subjective norms of Pakistani respondents.

*4.15 Entrepreneurial Intentions*

The Scottish male respondents put business at higher level in their future career list, indicated more tendencies to take business associated risks and showed superior level commitment towards this option than those of the female participants (Male mean 4.9333, Female mean 3.1871, t 3.441, df 152, sig .001). Those with FE college level education of their fathers had higher demand for entrepreneurial courses than the respondents having secondary level education of their fathers (Father Education, FE college- Secondary Education, Mean difference 1.19732, F 4.827, df 147, sig. .003). Father Occupation, mother education and residence had no impact on entrepreneurial intentions in Scotland.

Pakistani respondents with either illiterate or low level education of their fathers preferred business over secure and well paid jobs, seemed more ready to accept business related risks, attached more prestige with business and had serious considerations for starting business sometime after graduation than those from the higher qualified fathers group (Father education, No education-University education, Mean difference 3.64955, F 4.712, df 140, sig. .001). Those whose fathers were employed in public, private sectors, associated with other occupations or retired had higher demand for entrepreneurial courses than the respondents having unemployed fathers (Father occupation, Retired-unemployed, Mean difference 3.35450, F 5.234, df 140, Sig. .001). The female respondents had higher risk taking tendency than male participants ( Male mean 4.7091, Female mean 5.2209, t -2.134, df 139, sig. .035). The prospective teachers from rural areas preferred business over working for others and seriously considered starting their business after graduation than their urban counterparts (Rural mean 4.9756, Urban mean 3.8219, t 2.386, df 112, sig. .019). Mother Education and father's income had no impact on entrepreneurial intention of the prospective teachers in Pakistan.

**5. Discussion and Conclusion**

Factor analysis results revealed that the prospective teachers at Scottish university had high self-efficacy level, low instrumental readiness and entrepreneurial intentions whereas Pakistani respondents approached higher levels in terms of instrumental readiness and entrepreneurial intentions. Both the groups marked the same self-efficacy level. Majority of the Pakistani and about more than half of the Scottish prospective teachers believed that they did not have enough control over the direction of their life. In both the cases an ample number of participants associated their success with hard work. There was a little impact of luck on the achievements in both the cases. Generally majority of the prospective teachers had internal locus of control.

The majority of Pakistani and Scottish respondents were good at dealing with any unforeseen situation, logical in making decisions, ready to take business related risks, good at problem solving, preferred to be a leader rather than follower in group work, showed higher level commitment with work, liked hard work and face difficult situations with quite normal behavior. Generally both the groups marked higher position in term of self-efficacy. Pakistani male respondents were better in dealing with unforeseen situations whereas male participants from Scotland put them on higher level in term of taking risks and using logic in making decisions than their corresponding females. In Pakistan the children of high qualified and Scotland other than public, private sector employees, entrepreneurs and retired parent found better at leadership abilities like self-efficacy traits than their corresponding counterparts from the low qualified and public/ private employed or entrepreneurial parents groups. The prospective teachers who belonged to the urban area in Pakistan were better at risk taking and problem solving abilities than the participants from rural areas. There was no impact of residence on this variable in Scotland. In both the data sets the females exhibited more hardworking than males.

Majority of the Pakistani but more than a quarter Scottish respondents had access to supporting information and capital. The important people of one fourth of the Scottish and about three fourth of the Pakistani prospective teachers wished them to be future entrepreneurs. A bulk of the participants from both the groups had good social networks that might be useful for any future entrepreneurial activity. Generally a few Scottish and

a great majority of Pakistani prospective teachers exhibited instrumental readiness for entrepreneurship. Male and high income group respondents (over £10000) had higher instrumental readiness in Scotland than females and the participants from the low income group. Moreover, the important people of the male participants exposed stronger entrepreneurial wish for them than those of the female ones. In Pakistan male participants, the children of high qualified parents and those with their fathers employed in private sector indicated stronger instrumental readiness than the corresponding groups of females, low qualified parents and the respondents whose fathers were retired.

About one fourth of the closest friends and one fifth of the closest family of the Scottish prospective teachers wished to be entrepreneur in future but three fourth of family and friends wanted Pakistani prospective teachers as future entrepreneurs. In Pakistan the closest friends of the respondents whose fathers were employed in private sector and those from rural areas had stronger entrepreneurial wish than their counterparts from rural areas and retired parents group.

More than one third respondents from Scotland and three fourth Pakistani prospective teachers were entrepreneurially inclined. They wanted more money through entrepreneurial career and to approach the financial autonomy level by this option. There was a very high demand for teaching the students about entrepreneurship and starting a business from both the groups of the prospective teachers. They wanted a comprehensive course unit on how to run a business as an essential component of the teacher training courses. Generally more than half Scottish and three fourth Pakistani respondents intended to pursue an entrepreneurial career. The entrepreneurial intention was significantly higher in Pakistani respondents than their colleagues from Scotland. Scottish male and Pakistani female prospective teachers were more inclined towards entrepreneurship than their respective counterparts. Those higher education level in Scotland and illiterate parents in Pakistan had stronger entrepreneurial intention than the relevant group of participants from the low and high qualified category of parents from Scotland and Pakistan. In Pakistan the participants from rural areas and those whose fathers were employed or retired had more demand for entrepreneurial courses than their colleagues from urban areas and–whose fathers associated with other professions.

*5.1 Action implications*

Some entrepreneurial contents (idea generation, opportunity evaluation, business planning, raising and leveraging resources and strategies to help a young business grow) can be included in the curriculum of teacher training programs in Pakistan. These courses mainly focus on negotiation, sales and observation (Stoltenberg's 2nd Government Ministries, 2008).

This is a first study of its nature and this piece of research might stimulate further research work in the field. The measuring instrument used here could help future investigators. The findings of the study also provide some guidelines for making future decisions. One of the significant findings indicated that respondents in both the universities showed high demand for an independent course on entrepreneurship. Both Scotland and Pakistan can enhance the number of successful entrepreneurs by promoting entrepreneurial intentions among the prospective teachers who can effectively influence entrepreneurial attitudes of their students in schools. This demands serious consideration, by university authorities, teacher training institutions and governments in both the cases.

Possibly Pakistan can boost its economy through entrepreneurial promotion. Potential entrepreneurs if properly trained can play a leading role in this regard.

## References

Birdthistle, N., Hynes, B. and Fleming, P. (2007). Enterprise education programs in secondary schools in Ireland: a multi-stakeholder perspective. Education and Training, 49(4), 265-276.

Blenker, P., Dreisler, P. and Kjeldsen, J. (2006). Entrepreneurial education at university level – Contextual challenges. Tallen University of Technology. Working Paper Number 151. [Online] Available http://deepthought.ttu.ee/majandus/tekstid/TUTWPE_06_151.pdf (September, 8, 2008).

Boone, W. J. (1997). Science attitude of selected middle school students in China: A preliminary investigation of similarities and differences as a function of gender. School Science and Mathematics, 97, 96-103.

Choudhary, A., Myers, D., Nystrom, H. and Gokhale, M. (2007). Student impact of an entrepreneurship course. American Society for Engineering Education, 2007. [Online] Available http://www.icee.usm.edu/ICEE/conferences/asee2007/papers/1474_STUDENT_IMPACT_OF_AN_ENTREPRENEURSHIP_CO.pdf (September, 11, 2008).

Cheung,C.K.(2008). Practicing entrepreneurship education for secondary pupils through the operation of a new year stall in Hong Kong. The Asia-Pacific Education Researcher, 17(1), 15-31.

Dickson, P. H., Solomon, G. T. and Weaver, K. M. (2008). Entrepreneurial selection and success. Journal of Small Business and Enterprise Development, 15(2), 239-258.

Fagan, C.(2007). Enterprising Education in Scotland: is education for work enough? Journal of Educational equity, 7(1), 1-15.

Fiet, J. O. (2000). The pedagogical side of entrepreneurship theory. Journal of Business Venturing 16, 101-117.

Garavan, Th. N. and Cinneide, B. O. (1994). Entrepreneurship education and training programs: A review and evaluation. Part 1. Journal of European Industrial Training, 18(8), 3-12.

Haftendorn, K. and Salzano, C.(2003). Facilitating youth entrepreneurship, part 1: An analysis of awareness and promotion programs in formal and non-formal education programmes. Seed working paper number 59 - series on youth and entrepreneurship. Geneva: International Labor Office.

Henderson,R. and Robertson, M.(2000). Who wants to be an entrepreneur? Young adult attitudes to entrepreneurship as a career, Career Development International, 5(6), 279-287.

Higher Education Commission (2008). University of the Punjab - course. [Online] Available http://www.pu.edu.pk/description.asp?programid=900036 (June 8, 2008).

Hussain, I. (2008). Public policy and social sciences. HEC News and Views: a monthly magazine of Higher Education Commission Pakistan, August, Islamabad: HEC, 2-6.

Krugh, V.(1992). Student Enterprise Program, Lake Ridge Academy: The Burton D. Morgan Center for Entrepreneurial Studies, University of Cincinnati. [Online] Available http://www.entre-ed.org/_arc/states-o.htm

Lesko, T. (2006). Teaching entrepreneurship: The role of education and training-the Hungarian experience. [Online] Available http://www.nfgm.gov.hu/data/cms1202969/sme_belg.pdf (September, 8, 2008).

Louw, L., van Edden, S.M., Bosch, J.K. and Venter, D.J.L. (2003). Entrepreneurial traits of undergraduate students at selected South African tertiary institutions. [Electronic version]. International Journal of Entrepreneurial Behavior & Research, 9(1), 5-26.

Mason, T. C. and Terrence, C. (1999). Prospective teachers' attitudes towards urban schools: can they be changed? Multicultural Education 6(4), 9-13.

Mian, S. A. (2006). Can entrepreneurial university model help Pakistan leapfrog into the knowledge economy? Some reflections. Proceedings of First International Conference on Assessing Quality in Higher Education, Lahore, December, 11-13.

Miller, I.(2002). ACEnet-The Student Entrepreneurship Training(SET). ARC Springboard Award Winner-2002. [Online] Available http://www.entre-ed.org/_arc/states-o.htm

Ramayah, T. & Haurn, Z. (2005). Entrepreneurial intentions among the students of Universiti Sains Malaysia. International Journal of Management and Entrepreneurship, 1(1), 8-20.

Rehman, A. (2008). Promotion of excellence in learning and research. In A. Rehman, Higher education in Pakistan: A silent revolution. [Online] Available http://www.iienetwork.org/page/108514/ (May 22, 2008).

Reimers-Hild,C., King, J.W., Foster,J.E.,Fritz,S.M., Waller,S.S. and Wheeler, D.W. (2005). A framework for the entrepreneurial learner of the 21st century. Online Journal of Distance Learning Administration,8(2). [Online] Available http://www.google.co.uk/search?hl=en&q=Entrepreneurial+inclinations+among+teachers&btnG=Google+Search&meta (Sep, 19,2008).

Stoltenberg's 2nd Government Ministries, (2008). See opportunities and make them work! 2004-08. [Online] Available http://dwe.arkansas.gov/DeptDir/successstories/2005-2006/hays.doc (Sep 4, 2008).