Understanding the "Business Type":
A Comparitive Analysis of Management Students and Business Executives

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Abstract

Study of personality type has contributed a lot to our understanding and prediction of human behaviour, especially in organizational contexts. A great deal of interest is especially focused on what types of people are most effective in different management environments. This study aimed to identify differences in psychological types of management students and business executives using the Myers-Briggs Type Indicator (MBTI). It investigated two research objectives (a) to identify the psychological types of management students and business executives (b) to compare the average psychological types of management students and business executives for differences on four MBTI dimensions – extraversion-introversion (EI), sensing-intuition (SN), thinking-feeling (TF), and judging-perceiving (JP), Empirical analysis of data collected from 119 respondents (management students and business executives) revealed that the average "psychological type" of management students was INTJ while that of business executives was ISTJ. While there was no significant difference between the two groups on extraversion/introversion and thinking/feeling dimensions, business executives appeared to be to more sensing and judging types on an average than management students. The implications of these findings for both management practice and education are discussed in the paper.

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The shoe that fits one person pinches another;
There is no recipe for living that suits all cases.

Carl Jung, 1961

INTRODUCTION

The notion that people can be classified into "types" has fascinated both researchers and practitioners since a long time. One of the first known theories of personality types was proposed in 400 B.C. by Hippocrates, popularly known as the father of medicine, who grouped people into four temperament types: sanguine, melancholic, choleric and phlegmatic. Ever since there has been a continual interest in classifying people into "types" or "categories" on the basis of a set of common attributes.

A "type" is a class of individuals said to share a collection of characteristics; and groupings or sets of types are called "typologies" (Morgan, King, Weisz & Schopler, 2000). Some of the most interesting examples of typologies can be found in the folk wisdom of most cultures. Classifying people into personality types is a useful device that helps to make sense out of others' behaviour and to anticipate how they will act in future (Morgan et al., 2000). Study of personality types has contributed a lot to our understanding and prediction of human behaviour, especially in organizational contexts. A great deal of interest is especially focused on what types of people are most effective in different management environments. The implication is that a better understanding of personality would allow both individuals and organizations to capitalize on their areas of

strength and help them develop complementary areas so as to enhance work-related performance (Tan & Tiong, 2001).

One instrument, which is widely used to assess psychological types in the field of management, is the Myers-Briggs Type Indicator (MBTI). The MBTI, based on Carl Jung's theory of human personality, was first designed by Isabel Myers and Katherine Briggs in 1943 (Myers & Myers, 1980). Since then it has been extensively used in management research, education and practice. Studies have examined the relationship between psychological type and managerial behaviours such as decision making (Nutt, 1990), conflict management (Kilmann & Thomas, 1975; Mills, Robey & Smith, 1985), leadership (Roush & Atwater, 1991) and managerial effectiveness (Gardner & Martinko, 1990; 1996). Researchers have also investigated the correlation between psychological types and macro-level variables such as organizational roles (Steckroth, Slocum & Sims, 1980) or information systems (Davis & Elnicki, 1984). This study, in particular, aimed to identify differences in psychological types of management students and business executives using MBTI dimensions. It focused on two primary research objectives:

1. To identify the psychological types of management students and business executives

2. To compare the average psychological types of management students and business executives for differences on four dimensions - extraversion-introversion (*EI*), sensing-intuition (*SN*), thinking-feeling (*TF*), and judging-perceiving (*JP*)

THEORETICAL UNDERPINNINGS OF MBTI

Carl Gustav Jung did not intend to develop a formal typology for distinguishing among individuals. He was more concerned with describing cognitive processes or potentialities and needs of human beings. Nonetheless, his discussion of attitudes and functions has provided impetus for some important research on individual differences, chief among these being the work of Isabel Briggs Myers and Katherine Cook Briggs (Hall, Lindzey & Campbell, 2002).

During the Second World War, many men were taken away from the industrial workforce and drafted into armed services. Simultaneously, many women were also forced out of their traditional homemaker activities and were required to replace the men who had left for war. Since, for the majority of these women, the heavy industrial workplace was a strange new territory, Myers and Briggs felt that knowledge of one's personality preferences could prove to be a valuable aid in identifying the "best" kind of job for someone without relevant prior work experience. The result was the Myer-Briggs Type Indicator (Myers & Myers, 1980) which has come to be regarded as one of the most influential tests derived from Jung's theory of personality (Hall, Lindzey & Campbell, 2002).

The Myers-Briggs Type Indicator

The Myers-Briggs Type Indicator or MBTI was primarily developed for personality assessment and for classifying individuals into psychological types. Since its development, the MBTI has been used extensively across the world and has been translated into many languages, such as Japanese, Spanish, French, German, and others. The popularity of MBTI as a diagnostic instrument has increased dramatically over the past 15 years, and today it is the most widely used instrument for assessing mentally healthy individuals (Filbeck & Smith, 1996). It is widely used in business, education, and

counseling in areas as diverse as team building, career planning and leadership development (DeVito, 1985). Moore (1987) and Goby & Lewis (2000) noted that many organizations use MBTI to help managers better understand their communication styles and to appreciate others who may see things differently. Other organizations have used the instrument for team building, improving customer service, reconciling group differences, career planning, analyzing troublesome behaviour between employees, and facilitating organizational change and development (Tan & Tiong, 2001).

The reliability and validity of MBTI was a concern for academicians and practitioners when it was first introduced in 1943. However, continued research on MBTI and use of MBTI in a variety of settings has shown that individual preferences on MBTI are reasonably consistent over time. Myers & McCaulley (1989) found that the internal consistency and split-half reliability of MBTI is higher than .75. Other studies also demonstrate high reliability of MBTI with split half reliabilities ranging from .77 to .97 and test-retest reliability ranging from .77 to .89 (Carlson, 1989; McCarley & Carskadon, 1983; Tan & Tiong, 2001). While face validity of MBTI is largely accepted, Gardner & Martinko (1996) and Myers and McCaulley (1989) found a significant correlation between MBTI and various personality tests and interest inventories, indicating high criterion validity of MBTI as well.

The MBTI identifies sixteen types based on Jung's distinctions between extraversion-introversion (*EI*), thinking-feeling (*TF*), and sensation-intuition (*SN*), plus Isabel Myers' distinction between judging and perceiving (*JP*). According to the psychological type theory people have preferred modes of perception (sensing [*S*]/intuition [*N*]) and judgment (thinking [*T*]/feeling [*F*]), along with attitudes which reflect their orientation of energy (extraversion [*E*]/introversion [*I*]) and their orientation towards outer world

(judging [*J*]/perceiving [*P*]). Table 1 summarizes the focus, preferences, and potential strengths and weaknesses of these alternative preferences (Barr & Barr, 1989; Gardner & Martinko, 1996; Myers & Myers, 1980).

TABLE 1
Summary of Psychological Type Preferences and Characteristics

Psychological Type Preference	Focus	Strengths	Weaknesses (If Overextended)
Extraversion (*E*)	Energized by outer world; focus on people and things; active; breadth of interest; interactive; sociable; outgoing	Good at social interaction; enthusiastic and confident; stimulate communication and ideas; instigates action; open and straightforward	Intellectual superficiality; intrusive; lack of respect for others' privacy, easily distracted by external stimuli
Introversion (*I*)	Energized in inner world; focus on thoughts and concepts; reflective; depth of interest; concentration; inwardly directed	Good at personal interaction; stays calm and focused; can concentrate intensely; develops ideas; uses discretion in talking	May loose touch with outer world; bottles up emotions; keeps people at a distance; easily preoccupied; gives insufficient feedback
Sensing (*S*)	Facts; data; details; concrete; practical; reality-based; present-oriented; utility	Pragmatic; precise; stable; results-oriented; sensible; systematic; bases opinions on observations	Lacks long-range outlook; may overlook implications and meanings; may reject innovative ideas
Intuition (*N*)	Meanings; associations; possibilities; hunches; speculations; theoretical; future-oriented; novelty	Imaginative; conceptualizes easily; creative; holistic perspective; intellectually tenacious; idealistic	Unrealistic; out-of-touch; may overlook key variables or facts; bored by routine; scattered; overcomplicates
Thinking (*T*)	Analysis; objective; logic; impersonal; critique; reason; criteria; justice; systematic inquiry; principles	Rational; analytical; assertive; deliberative; logical; carefully weighs alternatives; firm but fair; explains thoroughly	Undervalues or suppresses own and others' feelings; overly analytical; cold; insensitive; critical; judgmental; overly formal
Feeling (*F*)	Sympathy; subjective; humane; personal; harmony; empathy; appreciate; values; compassion; trust; consideration	Persuasive; empathic; warm; sensitive; demonstrative and expressive; draws out feelings of others; loyal; committed to values	Overly sensitive; moody; may give indiscriminately; can become emotionally unburdened; unable to give unpleasant feedback
Judging (*J*)	Organized; planned; settled; closure control one's life; set goals; structured; routine	Plan; organize; and control well; persistent; lives are well-structured; decisive; conscientious; reliable	Close-minded; inflexible; can jump to conclusions too quickly; intolerant; critical; judgmental
Perceiving (*P*)	Pending; flexible; curious; spontaneity; tentative; let life happen; undaunted by surprise; open to change	Open-minded; adaptable; spontaneous; understanding; tolerant; inquisitive; zest for experience	Indecisive; procrastinates; unfocused; disorganized; impulsive may collect data too long before deciding

Source: Adapted from Gardner & Martinko, 1996

These four sets of preferences combine to form 16 distinct psychological types as shown in Table 2:

TABLE 2

Combinations of Preferences on MBTI Dimensions

Combinations of preferences on the four MBTI dimensions			
ISTJ	*ISFJ*	*INFJ*	*INTJ*
ISTP	*ISFP*	*INFP*	*INTP*
ESTP	*ESFP*	*ENFP*	*ENTP*
ESTJ	*ESFJ*	*ENFJ*	*ENTJ*

An understanding of type preferences and their interactions serves as the core of 'type" theory. For instance, *ESFJ*s, tend to draw their energy from outer world (*E*), process information based on facts and details perceived through the senses (*S*), are empathetic and make decisions based on people-centered values (*F*), and prefer a world that is organized, planned and controlled (*J*). Such people are usually warm-hearted, talkative, popular, conscientious, born cooperators, and active committee members. They need harmony and are good at creating it too. They insist on doing something nice for everyone and work best with encouragement and praise. Their main interest lies in things that directly and visibly affect others. It is important to note, however, that not all *ESFJ*s would exhibit these preferences in equal strength. In fact, it is likely that the same preferences would manifest themselves in somewhat different ways in different *ESFJ* individuals (see Myers & McCaulley, 1989; Myers & Myers, 1980; Thomson, 1998 for further details).

THE SEARCH FOR THE "BUSINESS TYPE"

As mentioned earlier, the MBTI has proved to be a useful research tool in both management education and research. In 2006, Ashbridge Business School, using MBTI, tested the personality preferences of 8000 managers, ranging from CEOs to junior managers, who had attended the school's management development programmes in the previous three years. While the study

found no significant differences between managers of different nationalities, sex or industry sector, there was a significant difference between the personality type of managers and non-managers as a whole. One of the key areas of difference was found in the thinking-feeling dimension; 85% managers said they made decisions on the basis of logical, objective analysis compared with only 45% of non-managers making the same claim (Woodruffe, 2006).

MBTI has also been used to research personality types that appear most commonly in middle and upper management. In a review of 60 studies, Walck (1992) found that regardless of occupation or business function, distribution of type among managers demonstrated a disproportionately high numbers of managers with N, T and TJ preferences. Similarly, Reynierse (1993) examined 1952 managers and executives in business and industry and found a greater representation of E, T and J preferences at all levels. He also found an interesting distinction between junior managers and senior executives, the former typically preferring S and latter typically preferring N ways of information processing. Johnson (1992) found that the prediction of promotions among managers in the wholesale grocery industry could be made reliably using the MBTI. Confirming Reynierse's results, he found that managers with intuitive preferences are more likely to be promoted. These results also hold across occupations. For instance, MacKinnon (1961) found that successful creative individuals, whether architects, writers, research scientists, or mathematicians, are almost always intuitives.

Myers & Myers (1980) conducted extensive research on students preparing for careers. They found that among high school graduates, the "businessman" and "businesswoman" type were predominantly ESJT. Similarly, Filbeck & Smith (1996) also found that most prevalent group

among management students is ESTJ. According to Filbeck & Smith (1996), this overrepresentation is not surprising since business curriculum disproportionately attracts students interested in controlling (J) and analyzing (T) concrete measures (S) of success, such as money and commerce. Borg and Shapiro (1996) also found that sensing-judging students typically gravitate towards business and professional classes at university level and often choose professions such as accounting and teaching.

Thus, on the basis of above research, we proposed:

Hypothesis 1: There will be a significant difference in the psychological type of management students and business executives

Hypothesis 2: There will be a significant difference in extraversion/introversion scores of management students and business executives

Hypothesis 2a: Management students will score higher on extraversion than business executives

Hypothesis 3: There will be a significant difference in sensing/intuition scores of management students and business executives

Hypothesis 3a: Management students will score higher on sensing than business executives

Hypothesis 4: There will be a significant difference in thinking/feeling scores of management students and business executives

Hypothesis 4a: Management students will score higher on thinking than business executives

Hypothesis 5: There will be a significant difference in the judging/perceiving scores of management students and business executives

Hypothesis 5a: Management students will score higher on judging than business executives

METHOD

The study aimed to identify differences in personality types of management students and business executives using MBTI dimensions. In particular, there were two research objectives:

1. To identify the psychological types of management students and business executives

2. To compare the average psychological types of management students and business executives for differences on four dimensions - extraversion-introversion (*EI*), sensing-intuition (*SN*), thinking-feeling (*TF*), and judging-perceiving (*JP*).

An exploratory research design was chosen which helped identify relevant dimensions to classify the two groups. The sample consisted of 119 respondents. Data was collected from 66 management students at IIM Ahmedabad and 53 business executives.[1]

The Myers-Briggs Type Indicator, Form M was used for the purpose of data collection. It is a self-scorable instrument with 93 items and contains four scales - extraversion-introversion (*EI*), sensing-intuition (*SN*), thinking-feeling (*TF*), and judging-perceiving (*JP*). 21 questions required the test-taker to choose between *E* and *I*; 26 questions to choose between *S* and *N*; 24 questions to choose between *T* and *F*; and 22 questions to choose between *J* and *P*.

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[1] Although a larger sample size would have been more appropriate, sample sizes with at least fifty cases are considered acceptable and valid and are routinely reported in MBTI research (Myers & McCaulley, 1989; Filbeck & Smith, 1996).

RESULTS AND ANALYSIS

This paper aimed to identify and compare the psychological types of business executives and management students. Following, Borg and Shapiro (1996), the responses on the four MBTI dimensions extraversion-introversion (*EI*), sensing-intuition (*SN*), thinking-feeling (*TF*), and judging-perceiving (*JP*) were analyzed as proportions in case of each test taker, that is, *E/(E+I), S/(S+N), T/(T+F),* and *J/(J+P).* These proportions were denoted as *ei, sn, tf* and *jp.* The average proportions for the two groups are presented in Table 3.

TABLE 3
Average Proportions of Sample Groups

Group	*ei*	*sn*	*tf*	*jp*
Management Students	.48	.46	.62	.59
Business Executives	.48	.64	.69	.78

As can be seen from Table 3, the average "psychological type" of management students was *INTJ* while that of business executives was *ISTJ*.

In other words, management students appear to be self-confident and display independence of mind unrestrained by constraints of authority, convention or sentiment. They are typically "idea-people" who perceive underlying patterns using real-world material. They display expertise in their specialization areas and enjoy developing unique solutions to complex problems. However, their need to be guided by reason coupled with pragmatism, could lead to an inordinate and ruthless emphasis on the criterion, "does it *work?*" with regard to everything from problem solving to research to social norms (Heiss, 2009). With little emphasis on feeling, they might not be very good at managing interpersonal relationships.

Business executives, on the other hand, appear to be systematic, serious and thorough. They seem to perform at highest efficiency when employing a step-by-step approach. They are good at making sense of complex data, and at catching errors and oversight. Once a new procedure has proven itself, the *ISTJ* business executives can be depended upon to carry it through, thus creating a sense of reliability and stability in the organization. However, they are conservative and could harbour a traditional orientation as opposed to visionaries or intuitive-thinking types (Ditzig & You, 1988). *ISTJ* managers often give the impression of being aloof and somewhat cold. They are not comfortable with effusive expression of emotional warmth, rather are most at home with "just the *facts*" (Butt, 2009).

Thus, hypothesis 1 was not rejected since there was a significant difference in the psychological type of management students and business executives.

The next step was to ascertain if there existed a significant difference between management students and business executives on the four MBTI dimensions. To begin with, the normality of distributions was examined using histograms and normality plots along with Kolmogorov-Smirnov and Shapiro-Wilk tests (Elliot & Woodward, 2007). The normality assumption was rejected for the data set at the 5% significance level ($p < 0.05$). Hence, it was deemed appropriate to use non-parametric tests for further analysis. The Kolmogorov-Smirnov test was employed to test similarity of distributions of the proportions at 5% significance level. The *p*-values of the comparison between management students and business executives on the four MBTI dimensions are presented in Table 4.

TABLE 4

Kolmogorov-Smirnov Test for Differences in Distributions of

Management Students and Business Executives

Dimension	Ka	Pr>Ka (*p*-value: asymptotic)
ei	0.52	0.95
sn	2.36	<0.0001*
tf	1.26	0.08
jp	1.94	0.0010*

*$p < 0.05$

As is evident from the above table, business executives appeared to be to more sensing and judging types on an average than management students, while there was no significant difference between the two groups on extraversion/introversion and thinking/feeling dimensions at the 5% significance level.

Thus, hypotheses 2 and 2a were rejected, that is, there was no significant difference in extraversion/introversion scores of management students and business executives. Similarly, hypothesis 4 and 4a also were rejected. There was no significant difference in thinking/feeling scores of management students and business executives.

While hypothesis 3 was not rejected and there was a significant difference in sensing/intuition scores of management students and business executives; hypothesis 3a was rejected. In fact, contrary to prior research, it was found that business executives scored higher than management students on sensing. Similarly, *hypothesis 5 also was not rejected as there was a significant difference in the judging/perceiving scores of management students and business executives. However, hypothesis 5a was rejected* with business executives scoring significantly higher than

management students on judging. A detailed discussion of the results is presented in the next section.

DISCUSSION

The results were surprising as they did not match our a priori expectations, both in case of management students and business executives. Filbeck and Smith (1996) and Borg and Shapiro (1996) found that most prevalent group among management students is *ESTJ*. Surprisingly, only one personality type, *INTJ* was not represented in their study. They contended that this type might not appear even in a larger sample since it constitutes only 1% of population. However, in our study the dominant type amongst management students was *INTJ* while that amongst business executives was *ISTJ*. Further analysis established that business executives were indeed more sensing and judging than management students.

The work environment of these two groups could be one of the factors underlying these findings. Lewin (1951) found that an active learning environment plays an important role in the cognitive style used. Piaget (1971) also asserted that intelligence is an aspect of the dynamics between a person and his/her learning environment (Filbeck & Smith, 1996). On the basis of prior literature, we understand that students in most management schools are *SJ*s (Borg & Shapiro, 1996); hence they might prefer lecture-based classes with a good deal of externally provided structure in a course. However, the course design at IIM Ahmedabad does not fit this description. Most classes are a healthy mix of case study approach, intense classroom discussion and interdependent projects and exercises, which encourage students to mould their cognitive styles

and personalities into a more intuitive-thinking type and not simply rely on a highly structured sensing approach.[2]

It is also probable that the students' types are moderated by the psychological types of their faculty or professors as well. Studies have also shown that college teaching attracts people from certain temperaments more than others. For example, Borg and Shapiro (1996) found that *NT*s and *NF*s are overrepresented among college professors. This is in tune with Myers and Myers (1980) finding that professionals who were most attracted to full-time teaching and research as a career were usually intuitives.

Another surprising finding was that the predominant type among business executives is *ISTJ*. This could be possible since organizations tend to rely on established procedures and policies in order to ensure smooth functioning. Managers with *STJ* profiles are particularly found in the environment of large organizations as they are good at planning, organizing in accordance with company policies and implementing them to ensure smooth running of these corporations (Tan and Tiong, 2001). Since sensing managers are predisposed towards detail oriented, systematic behaviour aimed at upholding conventions and traditions, they might be overrepresented in highly structured organizations.

Interestingly, while the thinking-judging types appear to provide strong management at middle-management levels, research has shown that it is the intuitive types who frequently inhabit the highest levels of corporate and financial management levels. Reynierse (1995), in his study of

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[2] We believe the higher proportion of sensing-intuition among management students can also be attributed to the fact that data was collected from second year management students. It is possible that more SJs would have emerged if data had been collected from first year (entry-level) students as well.

3688 Japanese managers, found that Japanese companies extensively select *ISTJ* for middle-management; however they prefer *ENTJ* for the CEO level. In another study, Reynierse and Harker (1995) examined the MBTI scores of 237 line managers and 190 staff managers. Line manager duties included day to day administrative and operational duties governed by corporate direction and long term plans, while staff managers were primarily market oriented and their scope at work involved longer planning horizons. Reynierse and Harker (1995) found that most line managers were *ESTJ* whereas staff managers were typically *INTJ*. These findings suggest that intuitive managers who favour more abstract information and perceptual processes are preferred at senior management levels. Intuitive managers can provide the idealistic, unconventional, and creative functions especially needed in higher management where more strategic planning activities are required (Tan & Tiong, 2001). At the same time, the predominance of thinking-judging type amongst business executives in our sample suggests that either managers are "recruiting in their own like" or behaving in a way that fits with perceived ideas about what makes a successful manager (Woodruffe, 2006).

CONCLUSION AND IMPLICATIONS

This paper aimed to identify and compare psychological types of business executives and management students. Results showed that the average psychological type of management students was *INTJ* while that of business executives was *ISTJ*. Further, business executives appeared to be to more sensing and judging on an average than management students

While this study reveals that a "business type" personality could be chiefly *ITJ*, we believe that predominance of any one psychological type in management ranks may not be ideal. It is

obvious that certain personality types may be more suited to specific roles than others. For example, *NT*s, *SF*s and *NF*s are expected to be better at customer oriented roles than *SJ*s ((McIntyer & Meloche, 1995), while *ST*s may be better at jobs that are high on routineness and involve less task interdependence and teamwork. Further, overrepresentation of any one type, especially in management teams, could result in the loss of contributions from others. Gardner and Martinko (1996) see this as a critical problem in top management teams which the higher echelons of strategic thinking and decision making. It is important to ensure the presence of different types in management teams in order to enhance organizational strength and effectiveness (Tan and Tiong, 2001).

Our findings also have significant implications for human resource management in organizations especially recruitment and training and development of managers. As discussed in the earlier section, the predominance of thinking-judging type amongst business executives in our sample suggests that either managers are "recruiting in their own like" or recruiting in a way that fits with perceived ideas about what makes a successful manager. However, overemphasis on recruiting a particular type could affect attempts to increase diversity in organizations. Highly homogenous teams could affect organizational performance in the long run since new or different approaches may not be tolerated (Woodruffe, 2006).

The other important question is to what extent should organizations train managers to model "prototype" managers? There are potential strengths and limitations in each psychological type. If the Myers' principles are applied, managers need not be pressured to conform to prototypes but rather diversity in managerial profiles can enhance both individual and organizational

development and can enable organizations to adapt to changing social and economic contexts in a better manner (Tan & Tiong, 2001).

This research holds significance for business school curriculum as well. It supports the view that instructors should encourage students to examine and analyze patterns and connections between the material, to approach problems in a creative and innovative way, and to grasp abstractions and complexities, thereby stretching their sensing styles towards an intuitive approach. Students with these skills would not only rise in the corporate world, but they would also be better prepared to deal with the uncertainties and ever-changing nature of today's business environment (Filbeck & Smith, 1996).

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