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# Article Title Page

## Identifying entrepreneurs through risk taking behaviour: illegal downloading

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**Structured Abstract:**



**Purpose** – This paper is the first in a series which explores whether it is possible to use risk-taking activities as way of identifying potential entrepreneurs. The research examines the motivations of individuals to engage in deviant consumer behaviour, in this case illegal downloading and the link between this behaviour and possible entrepreneurial characteristics.

**Design/methodology/approach** – The methodology approach was of a quantitative nature using a 32-item questionnaire disseminated to 215 undergraduate students at a UK University.

**Findings** – Although there was strong evidence of entrepreneurial traits existing across the participants, including risk taking propensity, no relationship could be found between risk taking propensity and illegal downloading. Reasons put forward for this findings were that the level of risk involved was too low to be identified as such by the downloaders, even though the nondownloaders were worried about being caught and therefore were not participating in it. Attitudes towards this misbehaviour changes when it is not for their own consumption and very few students participated in that activity.

**Research limitations/implications** – This study is limited to a cohort of undergraduate students at only one University. This study begins to understand the potential link between misbehaviour and entrepreneurial traits.

**Originality/value** – This paper examines the possible link between consumer misbehaviour, in this case illegal downloading and the display of entrepreneurial risk-taking characteristics. The implication of ‘consumer misbehaviour’ through illegal downloading being ‘entrepreneurial’ has, to our knowledge, not been previously tested and could be a useful and inexpensive way of identifying future entrepreneurs and consequently directing relevant support and training to the right people.

**Keywords:** Consumer misbehaviour, illegal downloading, entrepreneurial characteristics, risk taking propensity

**Article Classification:** Research paper

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**Running Heads:**

## 1. Introduction

Entrepreneurship is increasingly becoming an important area of academic research. It is now commonly recognised as a source of innovation, creativity and new knowledge, which ultimately leads to job creation, wealth and overall economic growth. Indeed, Gurol and Atsan (2006) state that entrepreneurship can be viewed as the engine of economic success and social adjustment.

In a BBC report (2011), the World Economic Forum (WEF) stated that the top 1% of entrepreneurs create 40% of the new jobs in the UK (far fewer companies than originally thought). This indicates the importance the UK economy (and worldwide economies) places on the entrepreneurial process, with many initiatives being developed to further encourage the next generation to embrace their entrepreneurial talent.

This paper looks at the entrepreneurial behaviours and intentions of undergraduate students at a UK university. Of specific interest is whether these undergraduate students are demonstrating certain entrepreneurial characteristics when obtaining their music via illegal downloading.

The music industry has been described as ‘in meltdown’ due to the widespread activity of illegal downloading, and Peer 2 Peer (P2P) internet sites such as Napster (Bonner and O’Higgins 2010). This new approach to obtaining music has caused huge upset in the music industry, allowing individuals to freely obtain their music quickly and easily. Conversely, the success of Apple iTunes shows that money can still be made from legal downloading.

The question is, are those who engage with illegal downloading displaying entrepreneurial characteristics in doing so, in particular the ability to take risks.

### *1.1 Entrepreneurial characteristics*

Entrepreneurship has been defined as “the discovery, evaluation, and exploitation of future goods and services ... [by] ... creation or identification of new ends and means previously undetected or unutilised by market participants” (Eckhardt and Shane 2003, p336).

The identification of successful entrepreneurs, in an attempt to recognise and/or predict entrepreneurial behaviours, has been the subject of many papers over many years with varying degrees of success. In some cases more than twenty qualities have been identified that distinguish entrepreneurs from others (Timmons et al 1977). Agreement on which are the strongest or most useful among this extensive list is still elusive. One explanation put forward for this situation is conceptual irregularities and complexities (Gurol and Atsan 2006). For example some approaches have attempted to classify or measure entrepreneurial intent. Other studies adopt the cognitive approach (favoured by Allinson, Chell and Hayes 2000) which is concerned with examining how entrepreneurs operate differently to others in terms of gathering, processing and using information. There is also an acknowledgement that social factors such as family background and environmental conditions such as tax reductions can also play a part in creating an entrepreneurial spirit (Gurol and Atsan 2006). One of the more popular areas of study utilises the trait model which proposes that entrepreneurs have certain characteristics or personality traits that differentiate them from other people (Das and Teng 1997).

The implications of using a combination of these approaches to understand entrepreneurial behaviour in order to increase validity have been discussed (e.g. Allinson et al, 2000; Das and Teng, 1997). However it is the trait approach where most progress has been made, particularly in the study of students’ behaviour (Gurol and Atsan, 2006), and consequently this was considered the most appropriate for this study. The trait approach is based on the premise that entrepreneurs have certain unique characteristics or personality traits. Whilst academic research on the notion of an ‘entrepreneurial personality’ still remains

somewhat controversial, there does appear to be some agreement on some key characteristics that entrepreneurs are likely to possess (Nandram and Sampson 2000). Koh (1996) identified the four key traits as need for achievement, locus of control, propensity to take risks, and innovativeness. In the Gurol and Atsan (2006) study they examined six characteristics, using the same four as Koh (1996) and adding tolerance for ambiguity and self-confidence onto the list. The importance of creativity and imagination has also been identified by other writers as being key in the entrepreneurial process (Shackle 1970).

The 'need for achievement' frequently correlates with entrepreneurial success, and it is often one of the most cited traits in entrepreneurial literature (Frank et al 2007, Gurol and Atsan 2006). Locus of control (or the ability to influence events in one's life) is a key entrepreneurial characteristic according to Koh (1996). Drucker (1986 p19) comments on the work of Schumpeter (1990) by quoting that "innovation is the specific tool of the entrepreneur".

Poon et al (2006) discuss how people with a high internal locus of control are less likely to conform to external influences, and are therefore more likely to try new approaches, pursue new opportunities, initiate change and take risks. Poon et al (2006) further comments how entrepreneurs perceive themselves to be efficacious (high personal self-efficacy (associated with entrepreneurs) indicates a will to exert more effort and persistence when faced with difficulties) and are therefore more willing to take on challenges, act on their environment or take on risky projects because they believe in their abilities. It is this key element of risk taking behaviour that this study examines further.

### *1.2 Risk taking propensity*

The propensity to take risks has always been associated with entrepreneurship. Indeed entrepreneurship has been viewed as a combination of innovative, proactive and risk-taking behaviour that then creates value in organisations (McDougall and Oviatt 2000). This taking of risks is not only with reference to profit and loss, but running your own business may also be risky with regard to career opportunities and family relationships (Gurol and Atsan 2006). However, again there are some inconsistencies in the body of research in this area. Brockhaus (1980), found no difference in risk taking propensity between those who had embarked on a new venture (within the last three months), managers (who had changed job roles within the last three months), and managers (who had changed their employers within the last three months). Sexton and Bowman (1983) also could not find a link between entrepreneurs and risk taking propensity. However, there is also strong evidence to suggest otherwise. Steward and Roth (2001) found in their study that entrepreneurs risk taking propensity was far greater than that of managers. This is supported by the work of Carland et al (1995) who concluded that risk taking propensity is likely to be a factor in an entrepreneurs psyche. Findings from Carland et al's study also indicated that age can have an impact of risk taking propensity. It was found that older participants showed a lower level of risk taking than that of their younger counterparts, and that higher levels of education led to a higher propensity to take risks. Overall the study showed that those entrepreneurs, who were driven by goals of profit and growth, do in fact display higher risk taking propensity than managers.

Two relevant studies on entrepreneurial characteristics of students examined whether certain traits were more evident in entrepreneurial students than others. Gurol and Atsan (2006) and Koh (1996) examined six entrepreneurial characteristics: need for achievement, locus of control, risk taking propensity, tolerance for ambiguity, innovativeness and self-confidence. Risk taking propensity was indicated as the strongest trait in both studies, with innovativeness also identified as very important. It is interesting to note at this point that both studies found a strong correlation across the different traits, which suggests that it is perhaps a combination of characteristics that form the entrepreneur.

This approach fits with that of the illegal downloader, where the individual is more likely to ignore the rules, take risks, and pursue the new opportunities that the internet provides.

### *1.3 Deviant behaviour*

Deviant consumer behaviour or consumer misbehaviour is defined as behavioural acts by consumers which violate the generally accepted norms of consumption situations (Fullerton and Punj 2004). These behaviours represent the 'dark side of the consumer' which has a negative impact upon us all, whether through loss of goods, damage to goods, or organisations themselves. Whilst this behaviour is clearly seen as wrong, according to Fullerton and Punj (2004) it is often tolerated and has such become a norm in the consumer experience. There are a number of types of consumer misbehaviour (including shoplifting, vandalism, fraud, and illegal downloading) some of which appear to be tolerated more than others.

Research shows that the misbehaving consumers appear to be a wide and diverse group, and few of which match any 'observable profile' (Wilson and Herrnstein 1985). Previous assumptions that the perpetrators are from a lower income/education class have shown to be incorrect (Jolson 1974). Interestingly, research shows there does appear to be some differences towards ethical/unethical behaviour when viewed from a gender perspective. The more recent studies by (Singhapakdi 2004) concluded that female students tended to be more ethical in their intentions than male students, whilst Kwong et al (2003) found male respondents more likely to purchase counterfeit CD's than female respondents.

It can be seen that whilst our consumption habits have grown and developed over time (particularly through the use of technology), consumer misbehaviours have consistently developed alongside. This would suggest that consumer misbehaviour is simply a component of our desire to consume.

### *1.4 Deviant behaviour and the internet*

It would seem that there are many opportunities to partake in deviant behaviour on the internet. Freestone and Mitchell (2004) have put forward a typology of deviant internet behaviours which include some activities that are illegal such as child pornography and others that are questionable such as online gambling and purchasing human organs.

A key question would be whether the internet somehow clouds the individual's perception of what is right or wrong (Bonner and O'Higgins 2010). Research has also shown that due to the anonymity of the internet, the ease of being able to engage in internet misbehaviour, and where there appears to be a lack of fear of punishment for an individual's actions (Freestone and Mitchell 2004; Logsdon et al 1994; Albers-Miller 1999), people are increasingly likely to not only continue the behaviour but also are likely to justify their behaviour.

Many researchers have found that a key factor in determining whether a consumer will buy a counterfeit good is where there is a distinct price advantage over an authentic good (Albers-Miller 1999; Bloch et al 1993; Prendergast et al 2002). This would indicate why consumer misbehaviour via the internet (with particular reference to illegal downloading) is so widespread.

The last of these activities appear to be extremely common among young internet users and are often not seen as an unethical practice. Hinduja (2007) described illegal downloaders to most commonly be male, under 21, and white. Additionally, another important factor in the behaviour is that of group influence, particularly via online communities (Chiou et al 2005). It is said that an individual's peers will have the greatest impact upon their online behaviour.

The evidence of how strong a group influence can be is demonstrated through the work of Kozinets (1999), who stated that the longer an individual spends online, engaging in any kind of online activity, they are more likely to gravitate towards other like-minded individuals forming an online group which in turn creates social interaction, acceptance of the behaviour and increases the likelihood of the behaviour being repeated. Kozinets (1999) further states that many of these online communities relates directly to consumption related interests, leading to increased shared enthusiasm for said activity. This could indicate as to why groups of individuals or perhaps indeed undergraduate students demonstrate behaviours and favourable attitudes towards illegal downloading.

### *1.X Downloading and the Internet*

In March 2011 the major record label Mercury Records announced that they will no longer schedule CD and vinyl versions of singles, they will now rely on downloads alone except for “rare exceptions” (Yahoo News Press Association 2011). This reflects the overall change in the music industry in recent years (McKenzie 2009), and has allowed consumers of music to locate their music from a variety of legal and illegal sources/companies. File sharing is made easy with peer-to-peer networks (Alexander 2002) with the process making it very difficult to trace the perpetrator (Chatzidakis et al 2007). Estimates indicate that over one billion songs are downloaded illegally every week (Oberholzer-Gee et al 2007).

Downloading music certainly appears to be more common in younger generations, particularly 16-24 year olds, with a particular trend of single students with fast internet connections, a limited budget and time-rich (Mintel 2010). This demonstrates that these young consumers are able to grasp and feel at ease with new technologies in a way which previous generations have not.

### *1.5 Illegal downloading*

Illegal downloading and piracy have been hot topics in recent years, not only in the music industry but also within the fields of marketing and consumer behaviour, where academics attempt to understand the behaviours of the perpetrators. A number of terms have emerged which describe the illegal actions including ‘softlifting’ (Kini et al 2004; Lane and Lane 1996; Logsdon et al 1994), peer-to-peer file-sharing and music piracy (Gopel et al 2004).

It would seem that many students see ‘softlifting’ as an acceptable behaviour (Cohen and Cornwall 1989; Shim and Taylor 1993; Solomon and O’Brian 1990) largely due to the organisations concerned being perceived as very wealthy (Gupta et al 2004), and because the perpetrator can remain anonymous (Hinduja 2008). Students are also more likely to partake in this behaviour because they normally have the necessary computing skills and have good access to computers and the internet (Siegfried and Ashley 2006).

These perpetrators are likely to find reasons which validate the activity rather than find reasons which attack the activity (Bonner and O’Higgins 2010). This is often because they themselves engage in the activity and do not wish to view themselves as ‘guilty’, ‘to blame’, and they wish to avoid feeling ‘bad’. Festinger (1957) states that we feel distress when our beliefs are at odds with our behaviour (i.e. we know illegal downloading is wrong, but we still do it). They consequently morally disengage, where it is possible to persuade oneself that an activity is personally acceptable and consequently feel better about it (Bandura et al 1996). ‘The identifiable victim’ effect is also to be considered. Shu et al (2009) describes how an individual shows far greater sympathy towards an identifiable victim rather than a statistic. This would indicate that an individual would be more likely to stop illegal downloading if they saw it impacting upon their favourite artist, as opposed to a large (somewhat faceless) recording company. This view is echoed by Freestone and Mitchell (2004) who found that undergraduate students seem more permissive of software piracy. Their

results indicated that the students felt they were doing no direct harm to sellers as they cannot see any direct economic consequence of their actions, and that they feel they are the victims of artificially inflated prices for music, software and movie prices.

### *1.6 Risk and punishment*

Punishments for illegal downloading may exist in the form of: fines, the potential for obtaining damaging viruses via downloads, damage to reputation, loss of internet connectivity, or confiscation of computer. However, Phau and Ng (2010) found that the severity of punishment and the chances of being caught, coupled with the individuals' level of risk tolerance and attitude will impact on the intentions to use pirated software.

Illegal downloaders tend to mentally weigh up the risks associated with the practice in a number of key ways. Hinduja (2008) explains that the behaviour of deindividuating reduces self-awareness and self-regulation which in turn may facilitate individual digital piracy behaviour. Secondly, although one would expect that a fear of punishment would be a deterrent against illegal downloading (Lysonski and Durvasula 2008) the threat of prosecution did not in fact increase the willingness of students to buy their software products (Hsu and Shiue 2008). It would seem that the illegal downloader's perception of risk is low.

Additionally, the impact of social pressure and social norms would appear to affect an individual's behaviour, i.e. if peers and influential members of an individual's social group download illegally the behaviour is more likely to be condoned and therefore copied (Williams et al 2010).

### *1.7 Summary*

From the literature it is evident that a number of links have been found between being entrepreneurial in nature and the ability to take or assume risk (McDougall and Oviatt 2000, Steward and Roth 2001) and this link is particularly strong in younger individuals (Carland et al, 1995) There is also evidence to suggest that entrepreneurially-inclined students score far higher in their risk-taking propensity than non-entrepreneurially-inclined students (Gurol and Atsan 2006; Koh 1996). It is also recognised that downloading music illegally is a risky business because of the chance of being caught and the perpetrators are willing to take that risk regardless of the threats of prosecution (Phau and Ng, 2010). It is therefore possible to deduce that those students who download music illegally are more likely to have a higher risk-taking propensity and are therefore more likely to be entrepreneurial in their nature. This risk taking activity can also be linked with high self-efficacy level, another entrepreneurial trait. This means that these people are more like to ignore the rules, take risks and pursue new opportunities that the internet brings because they believe in their own abilities. The following hypotheses are therefore proposed:

H1: There is a link between risk taking propensity and other entrepreneurial traits

H2 There is link between risk taking propensity and illegal downloading behaviour

If these two relationships are evident then it is possible to surmise the following:

H3 There is a link between downloading behaviour and entrepreneurial traits.

If such a link can be proven then it may be possible to identify students, and others, who have the necessary characteristics to become successful entrepreneurs. Such early detection would enable appropriate resources such as training, work placements and investment opportunities to be directed more accurately towards people who will succeed. This is of interest, not only to those involved in entrepreneurial education, but also economists and business leaders whose challenge it is to stimulate and encourage economic growth and increased employment.



## 2. Methodology

The purpose of this research is to establish whether or not students are displaying entrepreneurial risk characteristics through their consumer behaviour of illegal music downloading.

The research was conducted via a 32-item questionnaire. The 32-items were divided into three sections. Section one asked the participant about their year of undergraduate study, age, whether they would consider themselves and their family honest and whether anyone in their immediate family owned their own business. Section two focussed on their entrepreneurial characteristics. The nine questions, which the participants rated themselves on a scale from 'strongly disagree' to 'strongly agree' emerged from a basis of existing entrepreneurial research which states that entrepreneurs display certain characteristics, and the stronger their agreement for these characteristics, the more likely they are to be entrepreneurial. Each item measures one of main characteristics in the following order i.e. propensity to take risks, locus of control, innovativeness, need for achievement, creativity, need for autonomy, need for power, tolerance for ambiguity, and endurance (McCelland 1961; Brockhaus 1982; Begley and Boyd 1987; Lumpkin and Dess 1996; Nandram and Sampson 2000; Koh 1996; Shackle 1970). The final section of the questionnaire asked the participant about their attitude toward illegal downloading, their own behaviour in regard to the activity, the risk they feel associated with the activity, and whether they are likely to engage in the activity in the future (and in what capacity). The questionnaire was pre-tested on ten individuals to ensure each question made sense and was logical in nature.

The questionnaire was disseminated to undergraduate students via their University's virtual learning environment (VLE) throughout September and October of 2012. Due to the timing of the questionnaire (at the start of the academic year) no prompting or chasing of the students for completion was necessary; this was put down to the students being keen, enthusiastic and willing at the start of the year. In turn, this gave a pleasing response rate. The population of the sample was from business students across a range of business related courses, including Business Studies, Marketing, Advertising, Economics, HRM, Information Systems and Events Management. Within the sample were some students who were also studying Business Entrepreneurship as either single or joint honours. The sample consisted of a cross section of students from first year to final year. It was important to post the questionnaire on modules within the VLE in which a range of courses (as stated above) would access. Therefore it was decided to target three large modules at each undergraduate level. The questionnaire tested the respondents' entrepreneurial characteristics (based on existing academic entrepreneurial findings), their consumer behaviour towards music downloading, their attitudes towards illegal downloading, and their subsequent behaviour after obtaining their illegally downloaded music.

The focus on students was based on the existing research and evidence that this target group tend to obtain their music online (Lee and Low 2004; Freestone and Mitchell 2004), having grown up with the internet, they have greater internet know-how, music is central to their lifestyle, and they have a wide network of peers which would indicate a greater awareness of illegal downloading (Siegfried and Ashley 2006).

There is of course academic debate regarding the use of undergraduate students for the purposes of research due to their homogeneity (Peterson 2001). However, due to the nature of the research area, it is in fact this target sample which needs to be investigated as academic insight shows that this group of individuals are the ones most likely to engage in this consumer misbehaviour (Freestone and Mitchell 2004; Lee and Low 2004; Siegfried and Ashley 2006).

Findings are presented in both percentage format and through SPSS data analysis to gain insight and search for any potential correlations between the dubious behaviour and the entrepreneurial attitude.

### 3. Findings

The student cohort:

The sample consisted of 215 students in total, with a majority age range of 18 to 21 and a fairly even male/female balance (46% and 54% respectively). The majority of the respondents were in their first year of University study (74%). The majority of respondents classed themselves as 'middle class' (45%) followed by 'working class' (39%). Respondents were specifically asked about how 'honest' an individual they thought they were and 99% stated they 'were an honest individual' and 94% also felt their closest family were 'honest'. Additionally, 48% of respondents said someone in their close family owned their own business.

#### 3.1 Entrepreneurial characteristics:

The questionnaire asked participants to address nine questions relating to entrepreneurial characteristics, as identified earlier, and the extent to which they agreed with each statement. The five point scale rated responses from strongly disagree to strongly agree. Table 1 indicates the mean for each scale and the percentage of participants who either agreed or strongly agreed with the statement.

Table 1: **Entrepreneurial characteristics**

These results indicate that many of these students are displaying the entrepreneurial characteristics recognised in academic findings. The mid-point on the scale is 3 and all the means are beyond that point. Over 70% of the students considered themselves as having a need for achievement, a need for autonomy and endurance. Only two of the traits were identified by less than 50% of the students, these being innovativeness and tolerance of ambiguity. Our main interest in this study is the students' attitude to risk and 59% agreed with the statement that they felt happy to take risks in their life. We must of course recognise the potential bias of the student responses. Despite being anonymous they may have felt that there was an obvious "right" answer in some cases. This point is revisited in the discussion.

Attitudes and behaviour towards illegal downloading:

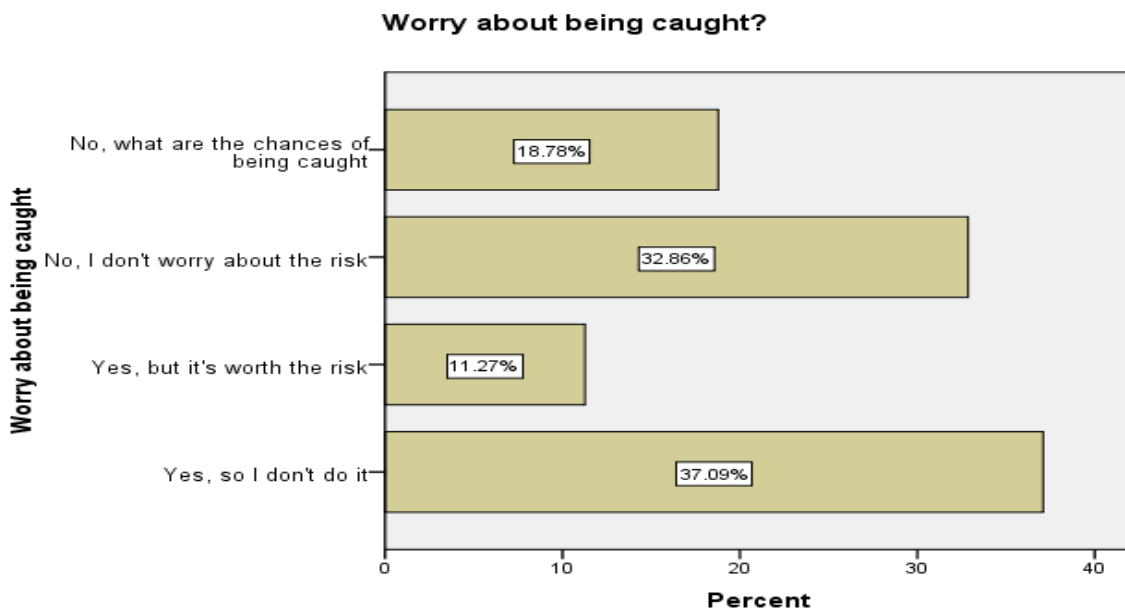
The student participants were asked to consider the behaviour of illegal downloading from two perspectives. Firstly, they were asked to consider the behaviour itself and how they perceive others who engage in illegal downloading.

Table 2: **Key attitudes towards people who illegally download**

These results indicate that the majority of the participants are aware of downloading and know people who partake in the activity although it is generally not considered something to be proud of. The majority (76%) do not perceive it as making a person dishonest and do not think that people worry about being caught. The participants were then asked for the main reason why people download illegally. The overwhelming reason given was because it is cheaper than buying music/films (54%). The ease in which it could be done was indicated as another important reason (25%). Also, 15% felt that buying originals is not worth the money.

They were then asked about their own attitudes and behaviours towards illegal downloading, what they engaged in themselves and what the risks involved were. The results indicate that 43% of the students stated that they download illegally, a figure that was lower than expected. Those that are downloading are mainly involved with downloading music (92%), with smaller number downloading films (41%) and computer software (24%). Figure 1 indicates how worried people are about being caught. This is an important insight into the level of risk that people perceive undertaking this activity. The results indicate only 11% are concerned about being caught and yet still download. The other students either do not download because they are concerned about being caught or download and do not worry about it. It is interesting to note there are 37% of students who state that they do not participate in the activity of downloading because they are worried about being caught. This compares with the 57% of students who stated that they did not download on an earlier question. This discrepancy will be revisited in the discussion section.

Figure 1: Concerns about being caught



Interestingly, this behaviour and the student’s responses only seem to apply to their direct behaviour. Their attitude towards the illegal behaviour changed when the illegal item was not for their own personal use. When asked if they would sell their illegally downloaded item to someone else 90% said they would never do this, followed by 73% who would not buy illegal downloads from someone else. Further 92% would not consider making money from the activity. These finding perhaps suggest that these activities are perceived to involve a higher level of risk and were therefore less attractive.

### 3.2 Statistical analysis

In order to test the hypotheses some statistical analysis was undertaken on the data. Firstly, to test H1, it was necessary to examine whether there was any correlation between the risk taking propensity measure and other entrepreneurial traits identified in the literature. To do this a Spearmans correlation was undertaken on the ordinal data. The results are displayed in Table 3 below.

Table 3: **Spearmans correlation**

It can be seen that a propensity to take risks correlates with all the other entrepreneurial traits, which also correlate with each other with the exception of Ambiguity and Locus of control and Ambiguity and Achievement. These results are supported by the work of Koh (1996) and Gurol and Atsan (2006) whose studies on the entrepreneurial traits of students also found that there was strong correlation across the identified characteristics, including risk propensity.

To test H2 the relationship between risk taking propensity and downloading behaviour was examined by undertaking an independent samples t test to examine whether people involved in downloading had more risk taking propensity than people who did not download. As illustrated in Table 4, the results indicated that the two mean values for the downloaders/non downloaders were very similar at 3.55/3.61 respectively. There was consequently no significant difference between these two groups of students (t-value, -.387, p-value, 0.699). H2 was therefore not proven.

To examine this relationship another way, the downloaders/nondownloaders were examined to establish whether there were differences in their concern about being caught by the authorities. The results indicated that the two mean values were quite different at 2.95/1.84 respectively. There was consequently a significant difference between these two groups of students (t-value, 7.71, p-value 0.00). To try to clarify the situation a little more we examined the correlation between these two constructs, risk taking propensity and concern about being caught. It might be expected that there would be a negative correlation between these two constructs. However the results, showed in Table 4, indicate that there was no relationship between the two constructs. This will be discussed in the next section.

#### Table 4: Results of t-tests and correlations

To reconfirm the results from testing H2 a t- test was run across all the entrepreneurial traits to establish whether there were any differences between downloaders and nondownloaders and no differences were identified. H3 is therefore not proven.

## 4. Discussion

The purpose of this study was to explore whether it was possible to identify future entrepreneurs by examining whether their propensity to take risks was reflected in illegal downloading behaviour. The results indicate, firstly, that risk taking propensity does seem to be a relevant proxy for entrepreneurial traits generally, correlating strongly with other accepted characteristics such as locus of control and innovativeness. It was also found that 43% of the students downloaded illegally, which was lower than expected based on previous research which suggested students to be active in this area (Freestone and Mitchell 2004; Siegfried and Ashley 2006). In particular, Lee and Low's (2004) study found that 63% of Generation Y admitted having illegally downloaded music, a significantly higher proportion.

The main finding from the statistical analysis was that there was no difference in risk taking propensity between the downloaders and the non-downloaders, although there was a significant difference in concern for getting caught between the two groups. To reinforce these results no correlation was found between risk taking propensity and concern about getting caught. Firstly, these results suggest that people who worry about being caught do not download. This is an interesting finding and contributes to the literature in terms of establishing whether the present punishments act as a deterrent against illegal downloading, as found by Lysonski and Durvasula (2008). However this concern is not being reflected in the risk taking propensity measure. One explanation could be that the risk measure needs to be more robust. It only consisted of one item compared with other studies that have used a number of items to measure the construct (e.g. Gurol and

Atsan 2006). However the fact that it correlates well with the other entrepreneurial traits does provide some validity. Another explanation could be the difference between attitude and actual behaviour. The questionnaire was designed so that all the entrepreneurial trait questions were at the beginning and consequently illegal downloading had not been mentioned when the risk question was being answered. The statement “I feel happy to take risks in my life” would measure a general attitude or outlook which may then not be reflected in actual behaviour. Indeed, one may feel inclined to answer positively to this statement, as a young undergraduate student, even if one’s behaviour does not necessarily reflect that attitude. Lastly the link between risk taking propensity and downloading may not be evident due to students not associating risk with downloading illegally. Taking risk in life may be associated with moving abroad, or buying an old car, but not getting some music for free on the internet.

## 5 Conclusion

This exploratory paper is the first in a series which looks at students’ consumer misbehaviour and the potential link with an entrepreneurial attitude towards risk. Key findings from this paper firstly suggest that there is a link between risk taking propensity and other entrepreneurial traits. However there does not seem to be a relationship between risk taking propensity and illegal downloading behaviour and consequently it is not possible to use illegal downloading behaviour as a way of identifying possible future entrepreneurs. One of the reasons put forward for these results is that illegal downloading is not perceived to be risky. It was interesting to see that the students’ attitudes towards the consumer misbehaviour significantly changed when asked if they would sell their download for profit, as this was seen to be far more dishonest. It may therefore be necessary to link entrepreneurial traits with misbehaviours that are enabled by the internet and perceived to be more unsafe such as buying counterfeit goods. It should also be noted that the “worry” construct did seem to be identifying a difference between the downloaders and nondownloaders and requires further investigation in terms of its relationship to risk.

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