What motivates creators of the Metaverse? A study on the effects of intrinsic need satisfaction and external incentives.

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Abstract1

The metaverse is evolving into a digital playground where users may create and interact with virtual material. While it's gaining popularity, we have yet to learn a lot about what motivates creators in these fields. This research examines what inspires Minecraft content creators employing the Uses and Gratifications theory.

A quantitative survey was conducted with 163 verified respondents to analyse their motives using Partial Least Squares Structural Equation Modelling (PLS-SEM). The findings show that internal motivators, such as skill development, self-expression, and a sense of community, are the most powerful motivators for creators to continue making and sharing material. Professional advancement, as an external motivator, has no significant impact on long-term commitment but does have a significant relationship with word of mouth, implying that creators inspired by career growth are likely to inspire others to interact with the platform.

The results presented imply that metaverse platforms should focus on making production intrinsically rewarding to maintain their content ecosystems thriving. This research improves our understanding of digital content production and provides important information to platform developers who wish to increase user engagement.

Keywords

Metaverse, User-Generated Content, Uses and Gratifications Theory, Internal Motivation, External Motivation, Minecraft, Content Creator

1. Introduction²

The metaverse is a digital world where people can interact and explore virtual spaces. The term "metaverse" first appeared in the 1992 science fiction book *Snow Crash* by Neal Stephenson. It comes from the word "universe", meaning everything that exists, and the Greek word "meta", which means beyond. In simple terms, the metaverse is a space that goes beyond our physical world, blending real life with digital life.

Today's metaverse is made possible by many new technologies. These include virtual reality (VR), augmented reality (AR), and mixed reality (MR) - together called extended reality (XR) - as well as digital twin models and blockchain. These tools help create a world where users can interact with digital objects and environments, almost like they are part of the real world (Mouritzis et al., 2022).

In recent years, interest in the metaverse has grown very quickly. For instance, the term "metaverse" was used only 16 times between 2000 and 2019, it was cited 277 times in 2021, with even more mentions in subsequent years. This growing interest can also be

seen in popular games such as Roblox, Fortnite Creative and Minecraft, where over 100 million people use metaverse-like experiences every day (Roh et al., 2024).

One well-known example of a platform with metaverse-like features is Minecraft. Launched in 2011, Minecraft has grown far beyond just a game. With nearly 140 million monthly active users as of 2021, it has become a popular space for creative and social interactions (Nadella, 2021). Minecraft's success – with over a billion downloads and significant financial returns – has even led industry leaders like Satya Nadella to call it a metaverse in its own right. Researchers have also pointed out that Minecraft matches many of the ideas behind the metaverse, recognizing it as both an early example and an important part of the growing metaverse landscape (Sánchez-López et al., 2022).

However, little research has focused on the goals and motivation of people who create content for metaverse platforms like Minecraft. Questions such as, "Why do users choose a metaverse platform instead of a normal online game?" and "What advantages does the metaverse offer compared to



© 2023 Copyright for this paper by its authors. Use permitted under Creative Commons License Attribution 4.0 International (CC BY 4.0). traditional online games and social media?" remain largely unexplored. Understanding these points is crucial for grasping why people invest time in creating content in these digital spaces.

Therefore, this paper aims to address this research gap by exploring why people create content for the metaverse game Minecraft. The study is grounded on the Uses and Gratifications Theory (UGT), which will be adapted and extended from a previous study by Student FAU (2023). It will examine whether intrinsic need satisfaction (representing internal motivation) or external incentives (representing external motivation) have a greater influence on the time invested in content creation, content creation intention and the sharing of experiences within these virtual environments.

In the following sections, the theoretical background is reviewed, the research model is explained, and the hypotheses are presented. This is followed by a detailed description of the methods, including participants, procedures and finally, the results are outlined and discussed.

2. Theoretical foundations and related work

2.1. Uses and Gratifications Theory³

The theoretical foundation of this study is based on the Uses and Gratifications Theory (UGT), which originated in the 1940s (Ruggiero, 2000). The theory examines why people choose certain media over others and how these media meet their social and emotional needs (Gan & Li, 2018; Chua et al., 2012). Thomas E. Ruggiero updated UGT for today's digital world in his work, Uses and Gratifications in the 21st Century (2000). He identified three key features of modern media:

First, interactivity, which means that the Internet allows users to interact in real time. People can create, modify and share content, not just consume it. This kind of active engagement offers new ways to communicate and connect.

Second, demassification, which means that unlike traditional media such as TV and radio, the Internet allows for a personalized media experience. Users can choose from a wide range of options and tailor what they see to their own interests.

Third, asynchronicity, which describes that digital media is available on demand, meaning that users can access content when it suits them.

In addition to these features, UGT also highlights other important points. Blumler and Katz (1974) noted that people choose media based on their individual needs and make deliberate, goal-oriented decisions about what to use. Yu (2024) added that users understand media competes with other sources of satisfaction, and ultimately, only the audience can decide how valuable and fulfilling a media experience is.

2.2. Minecraft as a User-Generated Content Platform in the Metaverse⁴

Recent advances in information and communication technology have led to many user-generated (UGC) platforms. One important area of UGC is online gaming, where players create and use digital content on the internet. Making game content is challenging because it involves many elements such as graphics, sound, animation and story. However, new game development tools have made it easier for individuals to create content on these platforms (Kang et al, 2024).

Online gaming platforms allow users to modify existing content – a process known as modding - rather than creating entirely new games. Mods let players change or add files that interact with the game engine, creating new gameplay experiences (Schlinsog, 2013).

Minecraft lets players explore randomly created worlds where they can build everything from simple houses to huge castles. In Creative Mode, players have unlimited resources to build freely, while in Survival Mode, they need to mine, craft tools, weapons, and defend themselves against enemies. Players can enjoy the game solo or with friends, making Minecraft a flexible environment that depends on their creativity and effort (Payne & Huntemann, 2019).

Overall, the steady flow of UGC drives creativity and innovation in metaverse environments. UGC helps democratize the metaverse by allowing users to shape digital spaces to fit their needs and interests. However, this openness also brings challenges. Issues like copyright infringement and inappropriate content require strong moderation and clear rules (Hussain et al., 2023).

2.3. The Rise of the Creator Economy⁵

Digital content production has changed as a result of the creator economy's explosive growth, making it possible for anyone to pursue content creation as a

³ Written by E. Uselmann

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hobby or a profession. Instead of depending on massmarket appeal, Anderson (2006) describes in "The Long Tail" how digital channels allow producers to target specialised audiences. This idea is particularly applicable to Minecraft, as users share their work with active communities through content providers ranging from amateur builders to professional influencers.

In "Social Media Entertainment," Cunningham and Craig (2019) go into additional detail about this change, highlighting the ways in which digital producers profit from monetisation tactics in platform-driven ecosystems. In this study, we investigate how the motivation of Minecraft content producers are influenced by both external incentives (like financial prospects and audience recognition) and internal motivation (such enjoyment).

2.4. The Future of Content Creation⁶

Community interaction is a fundamental component of Metaverse content creation. Our study supports this point of view by examining the ways in which audience engagement, feedback loops, and social interaction affect content producers' motivation. Digital integration and the progress of content production are closely related. In "Convergence Culture," Jenkins (2006) makes the case that conventional and digital media are becoming more and more integrated, which encourages interactive experiences. This convergence is best shown by Minecraft, which allows players to easily switch between playing, creating, and making money off of their work. By investigating how this interactive culture affects producers' motives, specifically in juggling financial incentives with personal fulfilment, our study broadens this viewpoint.

3. Research Model and Hypotheses

3.1. Hypotheses⁷

This study explores how different motivations of Minecraft content creators influence the average amount of time spent on content creation per week (Average Time Invested Weekly, ATIW), their willingness to keep creating in the future (Intention to Continue Creating Content, ICCC) and the extent to which they speak positively about content creation (Word of Mouth, WM). The motivations are categorized into overall internal and external motivation, resulting in six hypotheses (see Table 1).

While this represents the level of overall motivation, both internal and external motivation can be further specified to represent the level of specific motivation. The specific motivation included in the overall internal motivation are Skill Development, Information Dissemination, Enjoyment, Expression, Social Interaction: Keep Contact, Social Interaction: Make Contact, Sense of Community, Helping Behaviour, Escapism and Passing Time. The specific motivation included in the overall external motivation are Income, Reputation and Professional Advancement. Figure 1 illustrates the specific motivation that are assigned to internal or external overall motivation for measuring the hypotheses.

H#	Description
H1	Overall Internal Motivation is positively associated
	with Average Time Invested Weekly.
H2	Overall Internal Motivation is positively associated
	with Intention to Continue Creating Content.
НЗ	Overall Internal Motivation is positively associated
	with Word of Mouth.
H4	Overall External Motivation is positively associated with
	Average Time Invested Weekly.
H5	Overall External Motivation is positively associated with
	Intention to Continue Creating Content.
Н6	Overall External Motivation is positively associated with
	Word of Mouth.

Table 1: Hypotheses

3.2. Measurements⁸

The constructs are based on a previous study on Roblox by Student FAU (2023). The research model initially includes 17 constructs: three dependent variables, as well as 14 independent variables representing Internal and External Motivation for Minecraft content creation. Internal Motivation includes cognitive needs, affective needs, personal integrative needs, social integrative needs and tension release needs. External Motivation consists of income, actual income (removed later), status and professional advancement. The 14 items, most of which were measured on a five-point Likert scale, assess ATIW, measured in average weekly hours, ICCC and WM.

The survey used "for" instead of "in" to reflect content creation beyond the game itself. All construct items were mandatory, while demographic questions were optional.

⁶ Written by L. Ramaliu

⁷ Written by F. Paulini

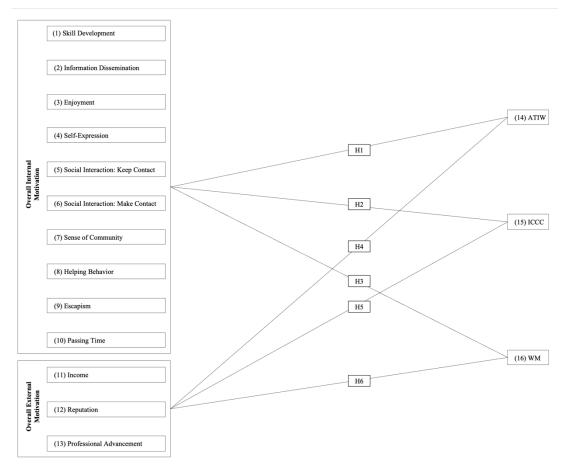


Figure 1: Research Model Overall Motivation

4. Methods9

4.1. Participants and Procedure

The study is descriptive and quantitative, data was collected via an online survey targeting content creators for Minecraft, adapted from a previous study by Student FAU (2023). The initial survey was redesigned by tailoring the survey to the Minecraft community. Content-specific customizations such as constructions (e.g. buildings, cities) and mods, plugins, texture packs, or skins were added to replace references to Roblox. Additional questions were added to clarify what qualifies as a "content creator" for Minecraft, and some repetitive questions were removed. The revised survey took approximately 10 to 15 minutes to complete and had 68 items. Average Time Invested Weekly (ATIW), income, Minecraft content creator qualification questions, and questions about personal information such as age, gender, and

heritage were differently measured. The questions were randomized and asked for general information about the participant's content creation for Minecraft, followed by questions about their experience with Minecraft. Demographic questions were included at the end of the survey.

Data collection took place from the end of December to mid-February 2025. Participants were found on various social platforms such as discord, reddit, twitch, and X. The main way to find participants was to randomly select content creators who were members of groups on these platforms and contact them in group chat, but mostly via direct message. In addition, Minecraft players we already knew recommended the survey to other creators, who then participated in the survey. The link to the survey was

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distributed via the FAU WiSo student mailing list, and a poster was distributed to encourage participation. No incentives were offered for responding to the survey.

Response was low due to several issues: Many ignored messages, fearing scams, distrusting our profiles or avoiding clicking unknown links. Those who started the survey often abandoned it, finding it too long or repetitive. However, 122 fully completed and 168 partially completed responses were collected, for a total of 290 responses. This represents a completion rate of 42 percent. 111 of these were removed because they didn't share content with others or didn't answer the questions that classified them as content creators and five responses had to be excluded from the analysis because the participants were under the age of 16. The data of the under 16year-olds were only taken into account for the calculation of the average age. 11 of the 290 responses had to be removed completely because the responses were fake, not serious, or the response pattern was too repetitive. In total, the survey collected 163 valid responses, and values with no information were marked as N/A. For these missing values, we used mean replacement because we wanted to fill in missing values without losing rows. Case-by-case was also not an option because it would eliminate values, nor was pairwise because it could lead to inconsistencies.

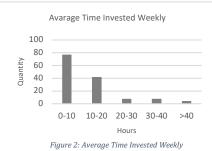
Participants came from 26 different countries, with the largest numbers coming from Germany and the United States of America.

Country	n	%	Country	n	%
Germany	34	20.86	Italy	2	1.23
USA	22	13.50	New Zealand	2	1.23
Austria	5	3.07	Romania	2	1.23
Canada	5	3.07	Australia	1	0.61
UK	5	3.07	Belarus	1	0.61
France	4	2.45	Czech Rep.	1	0.61
Netherlands	4	2.45	Denmark	1	0.61
China	3	1.84	Finland	1	0.61
Poland	3	1.84	Luxembourg	1	0.61
Russia	3	1.84	Puerto Rico	1	0.61
Argentina	2	1.23	South Korea	1	0.61
Belgium	2	1.23	Switzerland	1	0.61
Brazil	2	1.23	Unknown	52	31.90
Europe	2	1.23			

Table 2: Country of Origin

In addition, the ATIW showed that participants spend an average of 13.35 hours per week creating content for Minecraft. It shows a right-skewed distribution with a steep initial drop. This pattern shows a paretolike distribution with most occurrences in the lower ranges from zero to 20. There seems to be a cutoff point around 20 hours per week, after which very few values appear.

Most participants reported that they earned very little or no money from their content creation activities.



The average monthly income from creating content for Minecraft is \$675.16, and the highest paid participant has a monthly income of \$823.17. Minecoins were only earned by six content creators, with an average of 1078 Minecoins per month. The gender distribution is dominated by people who identify as male, with 58 percent identifying as male, 7 percent as female, and 3 percent as diverse/other, while the remaining 32 percent have an unknown gender. Moreover, the average novelty to Minecraft (time since signing up) is 6.66 years. The average age of developers is 20.37 years, with the youngest developer being 12 years old and the oldest being 47 years old. Table 3 shows these statistics in more detail.

Measure		n	%
Gender	Male	95	58
	Female	11	7
	Other/Diverse	5	3
	Unknown	52	32
Novelty	0-3	38	23
[years]	4-6	28	17
	8-10	22	13
	10-12	15	9
	>13	14	9
	Unknown	46	28
Age	12-15	5	3
[years]	16-18	51	31
	19-22	38	23
	23-25	19	12
	26-47	11	7
	Unknown	39	24
Average time invested weekly	0-10	77	47
[hours per week]	10-20	42	26
	20-30	8	5
	30-40	8	5
	>40	4	2
	Unknown	24	15

Table 3: Sample Characteristics

4.2. Validity and Reliability

SmartPLS 4 was used for model testing, which uses path-based partial least squares equation modelling (PLS-SEM) (Ringle et al., 2022). Measures such as Cronbach's alpha, composite reliability and average

variance extracted (AVE) were used to address the question of whether the indicators of the variables have convergent validity and reliability (Garson, 2016).

Reliability and validity measures are not applicable to ATIW because it is a single-item metric variable. These measures assess internal consistency, which requires multiple reflective indicators. Because this variable is measured directly on a metric scale, its reliability is assumed rather than calculated.

4.2.1. Overall Motivation

All constructs of the model exceeded the Cronbach's alpha (0.70) and composite reliability (0.70) criteria, representing exceptional levels of reliability (Garson, 2016). Only for Internal Motivation, the AVE threshold (0.50) and the Fornell-Larcker criterion are not met.

Construct	Cronbach's Alpha	Composite Reliability	AVE
External Motivation	.917	.920	.550
Internal Motivation	.946	.951	.346
ICCC	.829	.851	.747
Word of Mouth	.756	.760	.672

Table 4: Validity and Reliability for Overall Motivation

Construct	EM	IM	ATIW	ICCC	WM
External Motivation	.741				
Internal Motivation	.516	.588			
ATIW	.365	.301	1.000		
ICCC	.342			.864	
Word of Mouth	.395	.595	.173	.494	.820

Table 5: Fornell-Larcker Criterion for Overall Motivation

The Fornell-Larcker Criterion is not fullfilled, which states that the square root of a construct's AVE should exceed its correlations with all other latent variables (Fornell & Lacker, 1981). For this criterion, the square root of the AVE for each variable, which is the top number in each construct column, should be greater than the variance it shares with all other variables, which are the numbers below the top number. Another approach to measuring discriminant validity, the heterotrait-monotrait (HTMT) ratio of correlations, was proposed by Hensler et al. (2015).

Construct	EM	IM	ATIW	ICCC	WM
External Motivation					
Internal Motivation	.566				
ATIW	.377	.309			
ICCC	.391	.639	.219		
Word of Mouth	.469	.687	.200	.617	

Table 6: Heterotrait-Monotrait for Overall Motivatoin

This approach compares the average correlations between items of different constructs with the average correlations of items within the same construct (Hair et al. 2019). Discriminant validity is established if the HTMT values remain below the

threshold of 0.90 (Hensler et al., 2015). As shown in Table 6, all values meet this criterion, confirming the model's discriminant validity.

Therefore, the results regarding overall internal motivation must be viewed critically, as it is not entirely clear whether discriminant validity is present.

4.2.2. Specific Motivation

The Cronbach's alpha limit for acceptable multi-item scales is 0.70 (Garson, 2016), which the majority of the constructs in the model surpassed.

Construct	Cronbach's Alpha	Composite Reliability	AVE
Skill Development	.853	.864	.695
Info. Dissemination	.715	.715	.636
Enjoyment	.811	.829	.635
Self-Expression	.842	.846	.563
Social I.: Keep Contact	.777	.812	.691
Social I.: Make Contact	.758	.768	.674
Sense of Community	.713	.712	.636
Helping Behavior	.669	.687	.599
Escapism	.784	.827	.600
Passing Time	.809	.826	.631
Income	.919	.934	.861
Actual Income	017	018	.496
Reputation	.825	.834	.655
Profess. advancement	.909	.912	.785
ICCC	.829	.852	.746
Word of Mouth	.756	.766	.671

Table 7: Validity and Reliability for Specific Motivation

As seen in the results, Helping Behavior (0.663) and Actual Income (-0.017) do not meet these measures. Since Cronbach's alpha tends to underestimate reliability and is biased towards smaller constructs with three or fewer items, composite reliability and average variance extracted are the preferred alternatives (Garson, 2016). Composite reliability is also not met for Helping Behavior. Therefore, the loadings are examined. The outer loading of one indicator (0.698) is slightly below the recommended threshold of 0.7. However, since the deviation is minimal and the AVE (0.599) exceeds the acceptable threshold of 0.5, the construct still demonstrates sufficient convergent validity. In addition, removing this item does not significantly improve reliability. Because the item captures an important aspect of the construct, it is retained to maintain content validity. For Actual Income, all validity and reliability measures are not exceeded.

		ATIW R ² = .15	0		ICC R ² = .:		WM $R^2 = .364$			
	β	p	Ci	β	p	Ci	β	p	Ci	
Internal Motivation	.176*	.176* .018 .070316		.576***	*** .000 .43970		.544***	.000	.399690	
External Motivation	.269** .008 .093427			.055	.491	081181	.106 .242040258			

Table 8: Results Overall Motivation

The Actual Income construct has critical reliability issues, with Cronbach's alpha (-0.017) and composite reliability (-0.018) well below acceptable thresholds. In addition, the AVE (0.496) does not meet the recommended threshold of 0.5, and one indicator has a low external loading (0.585). Given these problems, actual income is removed from the model to improve measurement quality.

Furthermore, discriminant validity was assessed using the Fornell-Larcker criterion. As shown in Table 12 in the appendix, there is discriminant validity in this research model.

Three items have been removed due to poor loadings. One Escapism item: "Creating content for Minecraft helps me escape from the reality", one Passing Time element: "Creating content for Minecraft passes the time away when I'm bored" and one of Social Interaction: Keep Contact "I communicate with distanced friends by creating content for Minecraft".

5. Results¹⁰

Data was analyzed using structural equation models at the two levels of abstraction: overall motivation and specific motivation. Table 9 depicts the constructs and their mean value.

Construct	Mean
Skill Development	4.073
Information Dissemination	3.613
Enjoyment	4.420
Self-Expression	3.488
Social Interaction: Keep Contact	3.146
Social Interaction: Make Contact	3.743
Sense of Community	3.912
Helping Behavior	3.398
Escapism	3.540
Passing Time	4.329
Income	2.057
Reputation	2.867
Professional Advancement	2.429
Average Time Invested Weekly	13.355
Intention to Continue to Create Content	3.967
Word of Mouth	3.561

Table 10: Mean Values of Constructs

It is evident that Income (2.057), Reputation (2.867) and Professional Advancement (2.429) have comparatively low mean values, indicating that, on average, study participants expressed lower levels of agreement with these statements. The high mean

value of ATIW is attributable to the continuous scale employed in the survey for this construct. On both levels of abstraction, associations between variables were tested on a significance level of 0.1 with a two-tailed test-type.

5.1. Overall Motivation

In the model measuring overall motivation, the independent variables explain 15.0% of the variance in ATIW, 35.6% of the variance in ICCC and 36.4% of the variance in WM. Table 8 depicts the associations between independent and dependent variables in a matrix format. Path coefficients are marked according to the p values: 'for p<.100; * for p<.050; ** for p<.010; for p<.001. Internal Motivation shows a statistically significant positive correlation with all dependent variables, exhibiting a weak association with ATIW (*) and strong associations with ICCC (***) and WM (***). External Motivation shows a statistically significant positive correlation with ATIW (**), but not with ICCC and WM. Based on these results, H1 (*), H2 (***), H3 (***) and H4 (**) are not rejected. H5 and H6 are rejected. Table 10 lists the hypotheses and their rejection. Figure 3 depicts them visually.

Н#	Description	Rejected
H1	Overall internal motivation is positively	No
	associated with average time invested	
	weekly.	
H2	Overall internal motivation is positively	No
	associated with intention to continue	
	creating content.	
Н3	Overall internal motivation is positively	No
	associated with word of mouth.	
H4	Overall external motivation is positively	No
	associated with average time invested	
	weekly.	
H5	Overall external motivation is positively	Yes
	associated with intention to continue	
	creating content.	
Н6	Overall external motivation is positively	Yes
	associated with word of mouth.	

Table 9: Rejection of Hypotheses

5.2. Specific Motivation

In the model measuring specific motivation, the independent variables explain 21.3% of the variance in ATIW, 44.4% of the variance in ICCC and 45.4% of the variance in WM. Table 11 depicts the associations

¹⁰ Written by F. Paulini

between independent and dependent variables in a matrix format. Path coefficients are marked according to the p values: 'for p<.100; *for p<.050; *** for p<.010; *for p<.050; *** for p<.010; *** for p<.001. Out of the independent variables representing Internal Motivation, Helping Behavior (') is positively correlated with ATIW. Skill Development (**) and Self-Expression (') are positively correlated with ICCC. Social Interaction: Keep Contact (*) is negatively correlated with ICCC. Skill Development (*), Sense of Community (**) and Passing Time (') are positively correlated with WM. Out of the independent variables representing External Motivation, Professional Advancement (') is positively correlated with WM. Figure 4 depicts the results graphically in the research model.

		AT R ² = .						WI R ² =	
	β	p	Ci	β	p	Ci	β	р	Ci
Skill Development	.150	.300	088383	.318**	.007	.108502	.287*	.014	.081467
Information Dissemination	154	.451	434222	079	.436	238094	124	.250	303048
Enjoyment	.156	.250	087361	.136	.205	030326	014	.899	183175
Self-Expression	.004	.983	282356	.219'	.083	.001415	003	.979	198201
Social Interaction: Keep Contact	022	.820	186129	155*	.048	276 - (015)	.062	.508	093220
Social Interaction: Make Contact	.086	.351	070232	070	.546	260127	040	.693	200132
Sense of Community	133	.235	329041	.110	.311	084275	.270**	.009	.074414
Helping Behavior	.230′	.056	.016415	.185	.125	018379	.197	.127	014412
Escapism	049	.717	282163	004	.961	114145	150	.121	298018
Passing Time	085	.513	292132	.101	.250	042249	.167'	.096	001335
Income	002	.989	210202	.118	.324	090306	090	.329	237065
Reputation	.085	.575	168324	143	.178	308036	.024	.828	144224
Professional Advancement	.165	.114	022317	.049	.743	202289	.219'	.055	.025400

Table 11: Results Specific Motivation

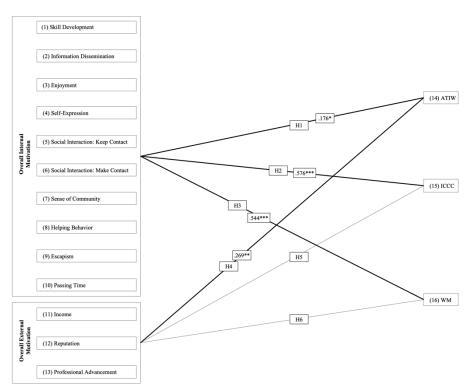
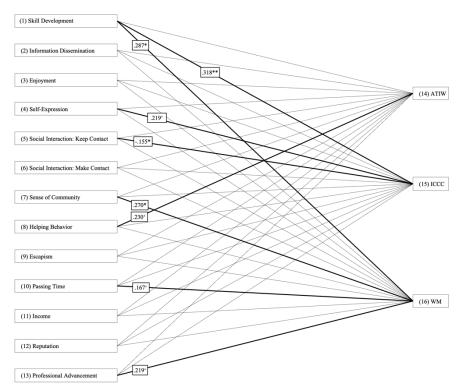


Figure 3: Resulting Model Overall Motivation



 ${\it Figure~4: Resulting~Model~Specific~Motivation}$

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7. Appendix

Construct	AI	ATIW	ENJ	ESC	НВ	INC	ID	ICCC	PT	PA	REP	SE	SC	SD	SIKC	SIMC	WM
AI	0,704																
ATIW	-0,054	1,000															
ENJ	0,042	0,262	0,797														
ESC	0,130	0,027	0,321	0,775													
HB	0,093	0,329	0,486	0,293	0,774												
INC	0,320	0,233	0,048	-0,028	0,252	0,928											
ID	0,103	0,226	0,530	0,268	0,627	0,257	0,798										
ICCC	0,062	0,198	0,500	0,299	0,465	0,198	0,433	0,864									
PT	0,107	0,043	0,557	0,555	0,348	-0,144	0,308	0,352	0,794								
PA	0,228	0,339	0,205	0,127	0,372	0,647	0,390	0,301	-0,089	0,886							
REP	0,213	0,343	0,473	0,288	0,590	0,472	0,574	0,360	0,216	0,609	0,809						
SE	0,194	0,266	0,608	0,521	0,681	0,180	0,634	0,532	0,491	0,409	0,643	0,750					
SC	0,131	0,158	0,580	0,437	0,570	0,144	0,525	0,468	0,440	0,272	0,464	0,609	0,798				
SD	0,085	0,329	0,665	0,314	0,566	0,278	0,702	0,583	0,364	0,480	0,577	0,628	0,559	0,834			
SIKC	0,110	0,119	0,369	0,224	0,542	0,161	0,335	0,165	0,315	0,226	0,400	0,423	0,437	0,267	0,832		
SIMC	0,190	0,308	0,587	0,246	0,622	0,352	0,596	0,397	0,307	0,393	0,599	0,574	0,586	0,608	0,485	0,821	
WM	0,141	0,173	0,459	0,207	0,525	0,167	0,423	0,496	0,347	0,370	0,435	0,486	0,536	0,550	0,373	0,442	0,819

Table 12: Fornell-Larcker criterion for Specific Motivation