An assessment of Artificial Intelligence (AI) on the Job of a Corporate Secretary in Zimbabwe: Threats and Opportunities

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Abstract

Artificial intelligence (AI) has been in existence since World War II though it is still largely a novel phenomenon in most developing countries (Stuart J. etal; 2010). This research assessed the impact of artificial intelligence (AI) on the corporate secretary's job and determined whether this could be a threat or opportunity. The objectives were to determine the understanding and impact of AI in Business Administration, to bring to the fore secretarial jobs that could be eradicated by the avalanche of AI, to identify the critical competences of the secretary and to determine the extent to which AI could be an opportunity or threat for the secretary. This study used descriptive qualitative methodology; questionnaires were distributed to 15 Executive Assistants and Personal Assistants plus 15 managers. The participants were conveniently sampled from Harare Polytechnic. This research proposed new competencies of professional secretary that need to be strengthened, specifically in the areas of the digitalization and automation secretarial administrative tasks, management office information system, data analysis, communication, and public relations function.

Keywords
Artificial Intelligence, Secretary, Jobs, Threat, Opportunity, Business Administration.

1. Introduction
The growing capabilities of artificial intelligence-related tools and services have propelled fears of job losses in various industries. Experts suggest that workers, instead of worrying, collaborate with AI and hone their expertise to face the new normal(Zhang Tianyuan ,2023). Zhang Tianyuan reports from Hong Kong. Max Tegmark (2023), MIT Professor, President of the Future of life once argued that, "Everything we love about civilization is a product of intelligence, so amplifying our human intelligence with artificial intelligence (AI) has the potential of helping civilization flourish like never before." AI has been in existence since World War II though it is still largely a novel

phenomenon in most developing countries south of Sahara including Zimbabwe. According to Stuart J. Russell and Peter Norvig (2010),” work on AI started in earnest soon after World War II, and the name itself was coined in 1956. (Shilpi Thapar and Associates; Company Decrtaries, 2019)

In their paper entitled; Understanding the Use of Artificial Intelligence (AI) for Human Resources in the Dubai Government Amal Almesafri and Mohammad Habes (2023), they have the following to say about AI and human resources:

AI is considered one of the most important outcomes of the Fourth Industrial Revolution due to its multiple uses in various fields

They went on to argue that, it is also expected that Artificial Intelligence will make a real breakthrough in business management and fundamentally affect employees’ work patterns. Among those work patterns could or has been affected are the office workers particularly secretaries. This paper therefore seeks to establish how AI could impact on the job of a secretary and also assess whether the impact could be considered a threat or an opportunity.

1.1 Research Questions
1.1.1. What are the traditional roles of a secretary?
1.1.2. What are the roles of a secretary in an AI world?
1.1.3. What opportunities for the secretary could arise from AI?
1.1.4. What threats may AI bring to the job of a secretary?

2. Literature Review
2.1.1. What exactly is AI?
John Maccarthy is said to have coined the term Artificial Intelligence in 1956 when he held the first academic conference on the subject. (Shilpi Thapar and Associates; Company Secretaries, 2019). AI has been defined differently by several authors as it evolved, here are some of the few early definitions proposed by various authors since AI became an area worth of study:

> The exciting new effort to make computers think . . . *Machines with minds*, in the full and literal sense.” (Haugeland, 1985).

> “The automation of activities that we associate with human thinking, activities such as decision-making, problem solving learning . . .” (Bellman, 1978).

AI could therefore be defined generally as an area of computer science that put emphasis on the creation of intelligent machines that could work and react like humans and learn on its own. The European commission’s high-level independent expert group on AI (AI HLEG, 2019) defined artificial intelligence as “software (and possibly also hardware) systems, designed by humans that, given a complex goal, act in the physical or digital dimension by perceiving their environment through data acquisition, interpreting the collected structured or unstructured data, reasoning on the knowledge, or processing the information derived from this data and deciding the best action(s) to take to achieve the given goal.”

There are basically three types of AI:
1. **Artificial Narrow Intelligence (ANI)/Weak AI**– It is capable of doing specific narrow tasks and focused on one narrow task. Calculator, Spell check, MS-Word, Netflix and Self driving cars with all its sensors/manuals/maps are good examples of ANI.

2. **Artificial General Intelligence (AGI) -** It is also called as Human-Level AI or Strong AI and can perform any intellectual task which humans can do but with a limitation of not capable enough of thinking and reasoning like humans. These are basically machines that can think and act like ‘humans’. General AI is the goal of all ‘Voice Assistants’ like Siri, Amazon Alexa, OK Google, Cortana and the like.

3. **Artificial Super Intelligence (ASI)-**It is a term referring to the time when the capability of computers will surpass humans by 2040 as reported. It is the intelligence beyond what we are capable of. All robots that we

see in movies which do not exist in real life are good examples of it. It can also be termed as "7th sense". (Shilpi Thapar and Associates; Company Secretaries, 2019).

4.

2.1.2. The objective and role of Artificial Intelligence

The major objective of AI according several authors is to explore ways to make a machine that could reason like a human, capable of abstract thought, problem-solving and self-improvement. There are several activities that are designed to be performed by computers with artificial intelligence and amongst these are the following:

- Speech Recognition
- Learning
- Planning
- Problem-Solving
- Record-Keeping

2.1.2.1. AI in the real world

- Email filters in Gmail for sorting email in different categories i.e. Primary, Social, Spam, updates, etc. Smart Replies Phrases i.e. "Thank you"," Let's do it."
- In LinkedIn, AI helps match candidates to jobs for better prospects.
- Google Predictive searches -Google search famous AI application search engine attempts to find what you are looking for.
- Face book uses AI to detect facial features and suggests tagging your friends.
- Twitter uses AI to identify hate speech, offensive material, and terrorist language and prevents its usage or deletes it.
- JP Morgan chase contract intelligence (CoiN) Platform uses AI machine learning and image recognition software for Contract Intelligence to analyze legal documents/contracts and extract important data points in a matter of seconds whereas manual reviewing may take hundreds of hours.
- From monitoring and diagnosis of chronic diseases to robotic surgeries, AI is reimaging the health care sector too. IBM -Watson technology for medical diagnosis is using cognitive technology to process and analyze the vast data, can review and store far more medical information – every medical journal, symptom, and case study of treatment and response around the world – exponentially faster than any human and all is evidence-based.
- Google's DeepMind Health platform is working with clinics and health institutes across the world to implement Artificial Intelligence. Google AI Eye Doctor is popular to examine retinal scans of the eye.
- Tesla Self driving car detects data and drives without human intervention.
- AI beats human pathologists at predicting patient survival times for certain kinds of cancerous tumors.
- AI algorithms "read" a series of Wikipedia entries on things and then answered a series of questions about them more accurately than humans do. (Shilpi Thapar and Associates; Company Secretaries, 2019).

2.1.3. What is a secretary?

The word" secretary" comes from the latin word "Secreterius" meaning a person entrusted with secrets.(Aniebiet-Abasi Ubon and Innocent Abidoye,2015).

A secretary is an administrative professional who plays an integral role in business and other organizational environments. Secretaries are typically the individuals who maintain and organize office tasks, implement procedures and carry out additional administrative duties, depending on the nature of their employment. (Indeed Editorial Team, 2023).

2.1.4. The Traditional Roles of a Secretary

The duties of a secretary could vary from one organisation to another depending on the nature and size of the organisation but the common duties are:

- Answering and directing phone calls
- Organising and distributing messages
- Maintaining company schedules

- Organising documents and files
- Greeting business clients and guests
- Documenting financial information
- Maintaining and ordering office supplies
- Scheduling meetings and conferences
- Supervising staff and new employees
- Coordinating with other organisations
- Implementing administrative procedures

As per CSSA best practices guide issued by Chartered Secretaries, Southern Africa in 2018 on AI and impact on Company Secretary, the company secretary can use AI in the following roles:

- o AI has a capacity of handling routine and administrative tasks which still occupies major portion in Company Secretary Work profile and which will enable company secretary to focus more on challenging and complex tasks within their specific roles and review the correctness of documents.
- o AI can assist in speedy outcomes with cognitive processes.
- o AI can eliminate mistakes to a greater extent.
- o AI will reduce manual overload thereby improving due diligence process and increases assistance with compliance procedures.
- o AI will assist company secretary to expedite research in various topics/issues such as confirming that the possible new directors are not conflicted on any other platform prior to appointing them to the board by running extensive research throughout various social platforms and many other similar tasks.
- o Documents can be lodged with regulatory authorities which are repetitive in nature if automated.
- o Filing and distributing documents such as annual financial statements of the company which is again a repetitive and automated task. The robot will simply learn the date required for submission and the manner in which the financials would be submitted and can be done with minimal supervision.
- o Distribution of minutes via email to directors and committee members for their comments by a certain date can be automated.
- o Drafting of the agenda of meeting as well as the notice of the meetings and distributing to relevant same persons in the same format can be automated with the input of company secretary.
- o Robots can assist Company Secretary in meetings in providing data and statistics to directors when needed. Further, minutes cannot be recorded by robots as it needs judgment as to what to include from meetings verbatim.
- o AI can assist in drafting and reviewing of repetitive clauses in contracts and company policies more accurately. Standard clauses can be automated with the same or similar wordings. Complex clauses would need human intellect to avoid liabilities.
- o The formulation of board evaluation questionnaires could be subject to automation quite easily but director's interviews, induction cannot be conducted by robots as it involves human elements of judgment.
- o The use of automated machines is already started in meetings which are conducted via Skype so as to track facial expressions, which may be missed by the other participants. Facial expressions go a long way in identifying a participant's mood, hostility, and cooperation – this is useful when conducting board evaluations to assess the performance of directors in relation to the tone that they set in meetings and how this affects the overall functioning of the board.

3. Methods

A descriptive research was adopted for this study because according to www.myresearchtopic.com it comes with the following advantages over other research design:

1. One of the main advantages of descriptive research is that it is able to collect data from a large number of participants. This can be helpful in understanding complex topics. This makes it an important tool for researchers who want to understand complicated issues.
2. Another advantage of descriptive research is that it can explore different aspects of a topic. This can be helpful in understanding how people use products or how people feel about a particular situation. For example, descriptive research could explore how people use a product in different ways or how people feel about a situation after hearing about it.

3.   Finally, descriptive research is that it is usually cheaper, easier and quicker to carry out than other methods of research. It also increases the reliability of results, as participants are less likely to lie or select inappropriate answers.

4. Data Collection

data was collected mainly using the questionnaire below. population for the study was drawn from managers and secretaries at Harare polytechnic in Zimbabwe.

An assessment of Artificial Intelligence (AI) on the Job of a Corporate Secretary in Zimbabwe: Threats and Opportunities

Q1 To what extent are you familiar with artificial intelligence technology? (Single Selection)

Very familiar	Somewhat familiar	Not very familiar

Q2 How important do you believe AI is in the job of a secretary? (Single Selection)

Very important	Somewhat important	Not important	Not sure

Q3 How would you rate your comfort level with using AI to perform tasks traditionally done by secretaries? (Single Selection)

Very comfortable	Somewhat comfortable	Neutral	Somewhat uncomfortable	Very uncomfortable

Q4 What advantages do you think AI could bring to the secretary job role? (Multiple Selection)

Increased accuracy on administrative tasks	Enhanced productivity and efficiency	Optimized organization of files and documents	Reduced need for mundane tasks	Automated reminder and report generation	Improved performance analysis

Q5 Have you ever experienced a situation where AI technology was used to replace the job of a secretary? (Single Selection)

Yes	No	Not Sure

Q6 Would you view AI as a useful supplement to a secretary's job role? (Single Selection)

Yes	No	Maybe	Not sure

Q7 Do you think AI has the potential to reduce the number of secretarial jobs available? (Single Selection)

Yes	No	Maybe	Not sure

Q8. How do you think AI may impact the job satisfaction of a secretary? (Multiple Selection)

AI could improve job accuracy and reduce stress	07	100%
AI could automate repetitive tasks and free up time for more complex duties		
AI could streamline workflows and make the job more efficient		
AI could improve communication with clients and colleagues		
AI could let the secretary focus on more creative tasks		
AI could make the job more interesting and challenging		
AI could make the job more secure and offer better job stability		
AI could provide feedback to the secretary on their performance		
AI could enable the secretary to work from anywhere		
AI could reduce the risk of human error		

Q9 What features of AI would you most hope to see incorporated into a secretary's job? (Multiple Selection)

Question	Response	Rate %
Automated scheduling and calendar maintenance		
Automated data entry and document creation		
Automated customer inquiries		
Automated report generation		
Automated inbox organization and task management		
Automated meeting reminders and conference room bookings		
Automated transcription of voice calls into written notes		
Automated scheduling of travel and lodging arrangements		
Automated expense tracking and reimbursement		
Automated voice recognition for call answering		

Q10 How do you think AI will change the job of a secretary in the future? (Multiple Selection)

Question	Response	Rate %
AI could automate tasks that were previously done manually by a secretary		
AI could replace some of the duties of a secretary with machines		
AI could speed up the workflow of a secretary		
AI could allow a secretary to focus more on creative tasks		
AI could improve accuracy when completing administrative tasks		
AI could provide more efficient customer service		
AI could automate mundane tasks and free up time for more pressing tasks		
AI could provide insights into data and analytics to better inform decisions		

5. Results and Discussion

Q1 To what extent are you familiar with artificial intelligence technology? (Single Selection)

Table 1. Familiarity with AI

Very familiar	Somewhat familiar	Not very familiar
14%	57%	29%

Only 14% of the respondents claimed to be familiar with the term artificial intelligence (AI) and 57% were somewhat familiar yet 29% were honest enough to say that they were not familiar with AI (Table 1, Figure 1).
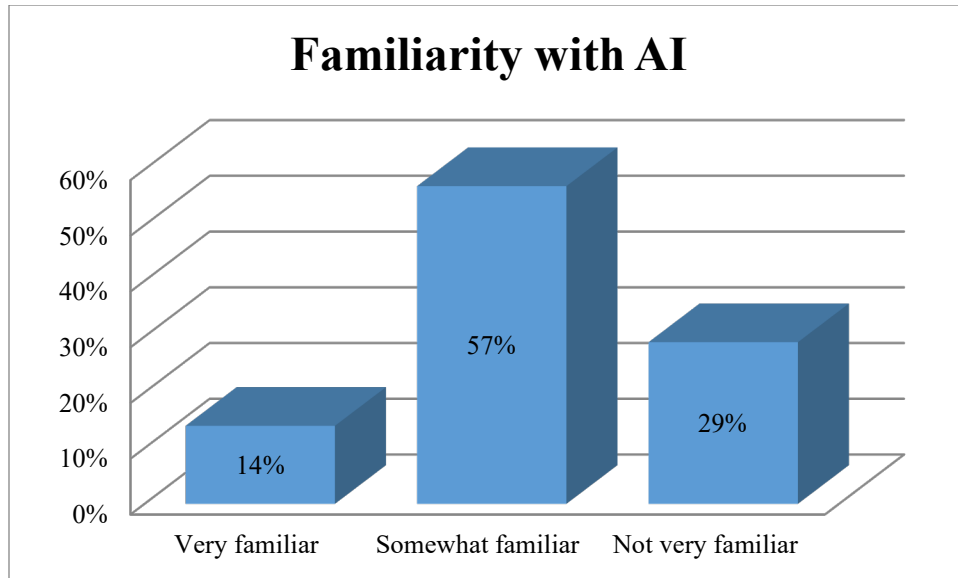
Figure 1. Familiarity with AI

The graph depicts that the bulk of respondents were somewhat familiar with AI. 57% of them against only 14%. This shows that most secretaries are not very familiar with AI.

Q2. How important do you believe AI is in the job of a secretary? (Single Selection)

Table 2. Impact of AI

Very important	Somewhat important	Not important	Not sure
29%	71%	00%	00%

Only 29% of the respondent s felt that AI is very important to the job of a secretary yet 71% felt that AI is somewhat important, a sign that they may not be too sure of the importance of AI to the job of a secretary (Table 2, Figure 2).
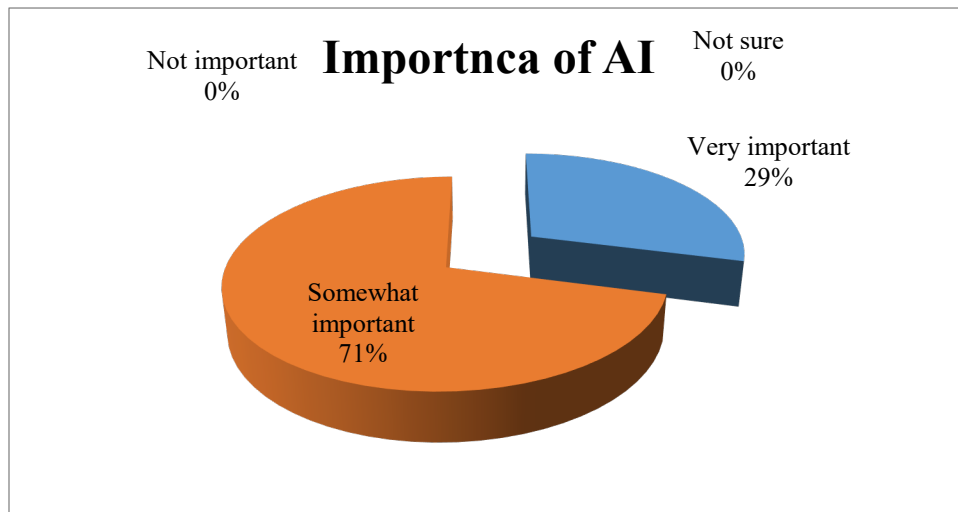

Figure 2. Impact of AI

The pie chart above shows that most respondents (71%) felt that AI is somewhat important to the job of a secretary.

Q3. How would you rate your comfort level with using AI to perform tasks traditionally done by secretaries? (Single Selection)

Table 3. Level of Comfort with AI

Very comfortable	Somewhat comfortable	Neutral	Somewhat uncomfortable	Very uncomfortable
14%	29%	14%	43%	00%

Only 14% of the respondents were comfortable with AI with 29% saying they were somewhat comfortable. The bulk of the respondents 34% expressed being somewhat uncomfortable (Figure 3, Table 3).
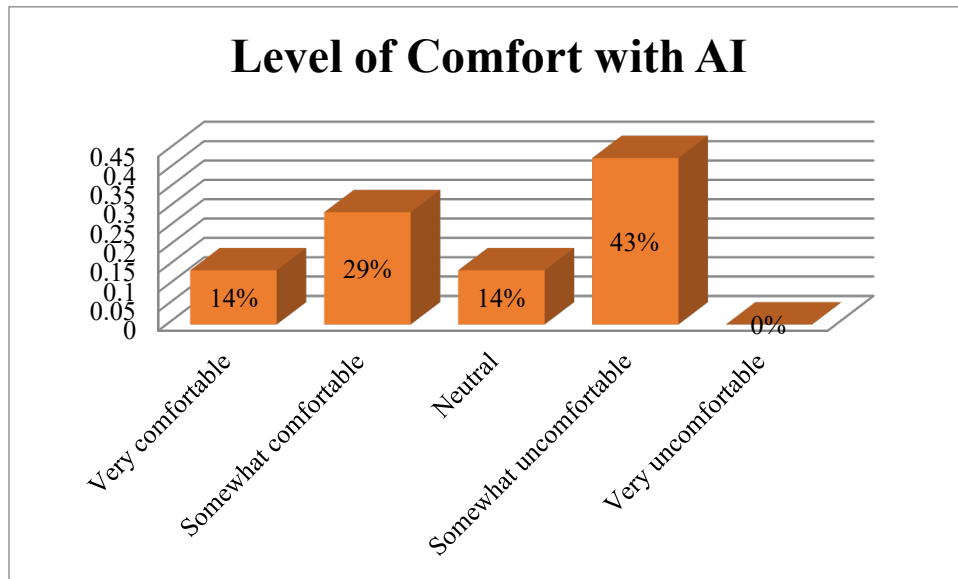

Figure 3. Level of Comfort with AI

The chart above shows that a lot of the respondents 43% have some kind of discomfort with AI as they indicated that they were somewhat uncomfortable with AI.

Q4. What advantages do you think AI could bring to the secretary job role? (Multiple Selection)

Table 4. Advantages of AI

Increased accuracy on administrative tasks	Enhanced productivity and efficiency	Optimized organization of files and documents	Reduced need for mundane tasks	Automated reminder and report generation	Improved performance analysis
71%	71%	14%	29%	57%	14%

According to findings tabulated above, AI brings a lot to job of a secretary such as increased accuracy on administrative tasks (71%), enhanced productivity and efficiency (71%), automated reminder and report generation (57%) (Table 4, Figure 4).
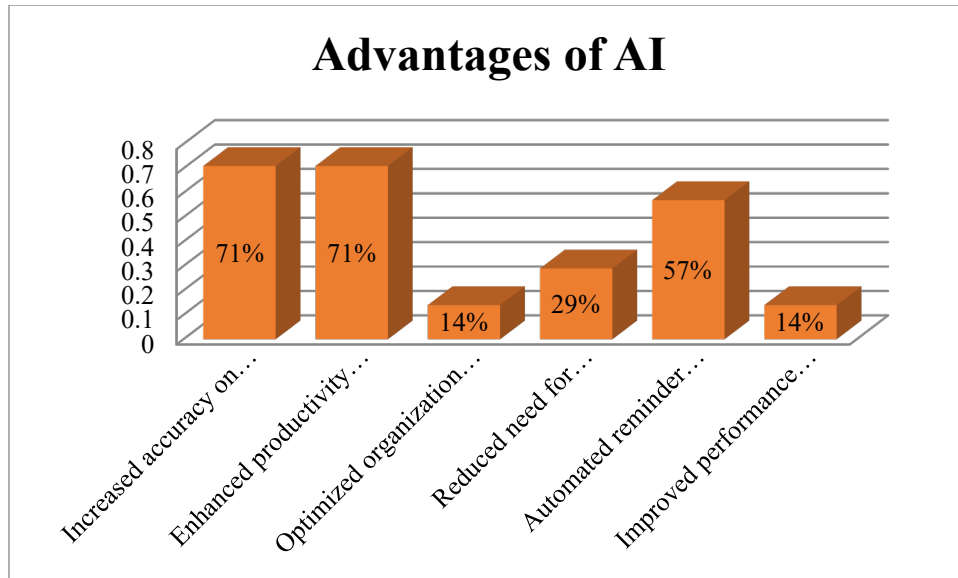
Figure 4. Advantages AI

The chart above clears shows the benefits of AI to a secretary's job , chief among the benefits being increased accuracy and enhanced productivity.

Q5. Have you ever experienced a situation where AI technology was used to replace the job of a secretary? (Single Selection)

Table 5. Experience with AI

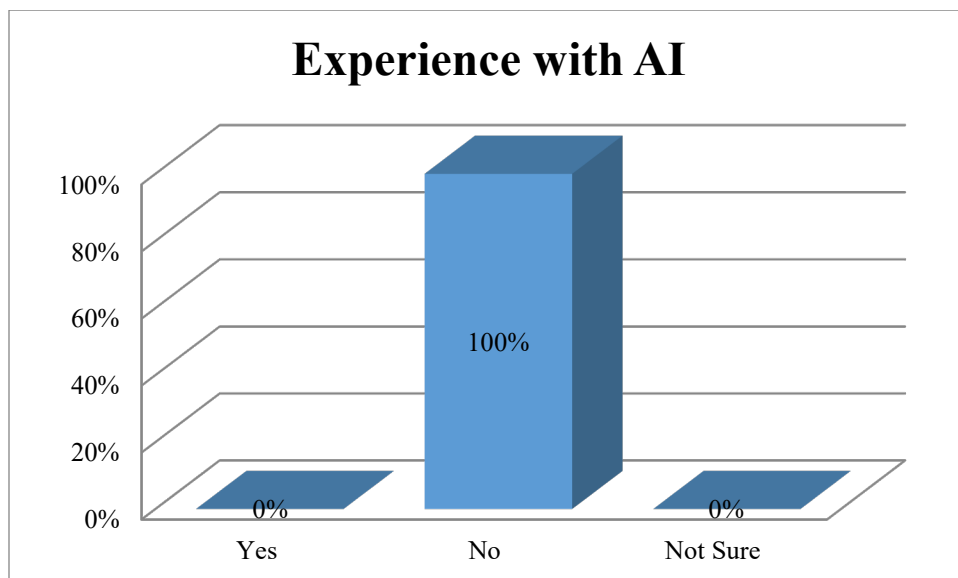| Yes	No	Not Sure
00%	100%	00%

Figure 5. Experience with AI

All the respondents claimed that they have never experienced a situation where AI was used to replace the job of a secretary (Table 5, Figure 5).

Q6. Would you view AI as a useful supplement to a secretary's job role? (Single Selection)

Table 6. AI as a Useful Supplement

Yes	No	Maybe	Not sure
57%	14%	14%	14%

57% of the respondents expressed that AI can and is a useful supplement to the job of a secretary with only 14% thinking that it is not so useful (Table 6, Figure 6).
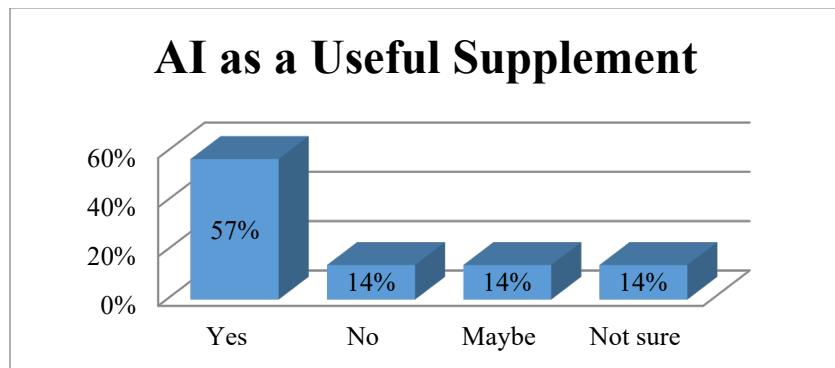

Figure 6. AI as a Useful Supplement

According to the chart above it is clear that AI can be a useful supplement to the job of a secretary as expressed by 57% of the respondents.

Q7. Do you think AI has the potential to reduce the number of secretarial jobs available? (Single Selection)

Table 7. AI Reducing the Number of Secretarial Jobs

Yes	No	Maybe	Not sure
43%	29%	29%	00%

43% of the respondents felt that AI has the potential to reduce the number of secretarial jobs with 29% adamant that AI cannot reduce the number of secretarial jobs. Another 29% were of the opinion that it may do so.
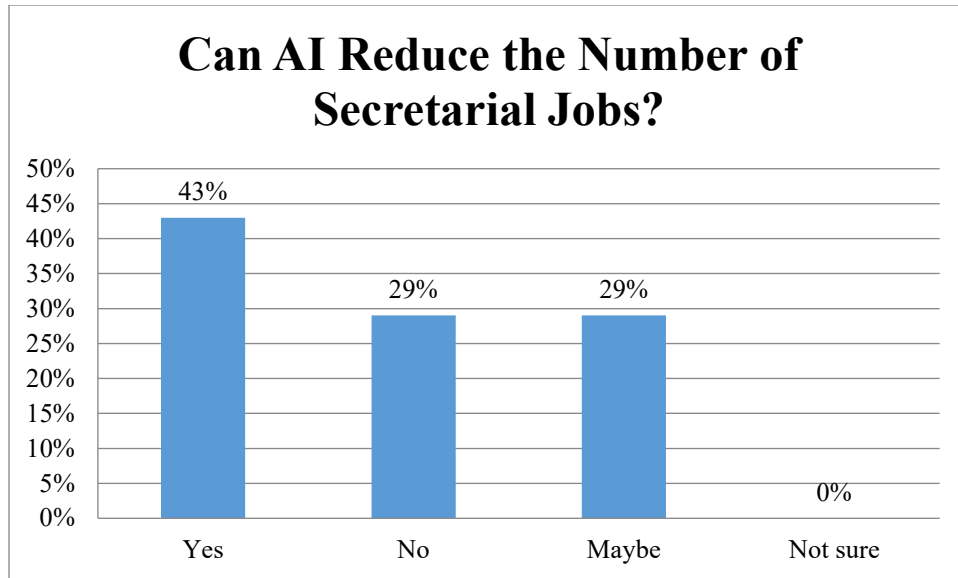
Figure 7. AI Reducing the Number of Secretarial Jobs

The chart shows that AI could to an extent reduce the number of secretarial jobs according to 43% of the respondents. 29% of the respondents felt that AI is not a threat to job of a secretary (Table 7, Figure 7).

Q8. How do you think AI may impact the job satisfaction of a secretary? (Multiple Selection)

Table 8. AI on Job Satisfaction

AI could improve job accuracy and reduce stress	07	100%
AI could automate repetitive tasks and free up time for more complex duties	04	57%
AI could streamline workflows and make the job more efficient	03	43%
AI could improve communication with clients and colleagues	04	57%
AI could let the secretary focus on more creative tasks	03	43%
AI could make the job more interesting and challenging	01	14%
AI could make the job more secure and offer better job stability	02	29%
AI could provide feedback to the secretary on their performance	00	00%
AI could enable the secretary to work from anywhere	04	57%
AI could reduce the risk of human error	05	71%

100% of the respondents all concurred that AI could improve job accuracy and reduce stress levels plus reducing the risk of human error hence improved job satisfaction (Table 8, Figure 8).
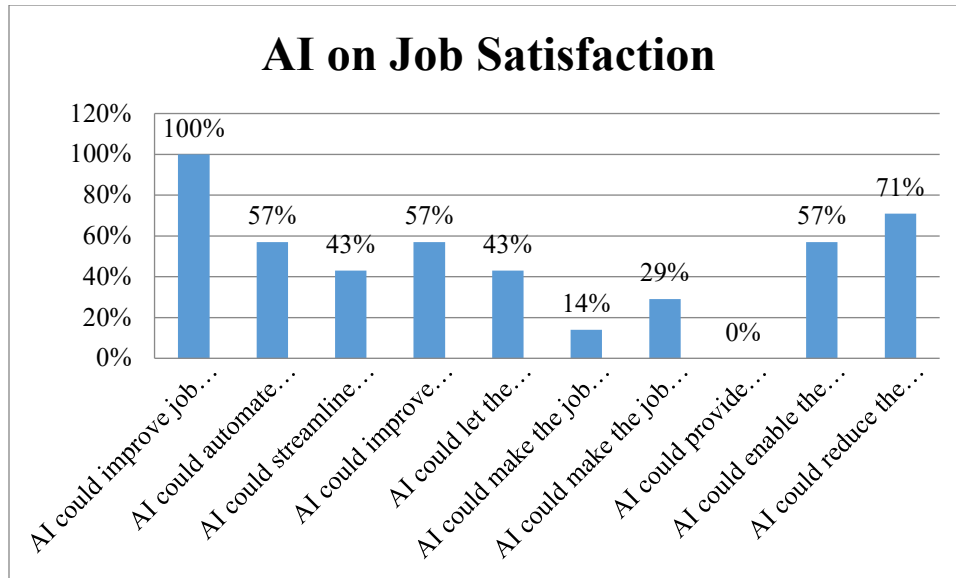
Figure 8. AI on Job Satisfaction

The chart above presents the information in the table above. Ai has the potential to increase job satisfaction among secretaries.

Q9. What features of AI would you most hope to see incorporated into a secretary's job? (Multiple Selection)

Table 9. Desired AI Feature

Question	Response	Rate %
Automated scheduling and calendar maintenance	04	57%
Automated data entry and document creation	05	71%
Automated customer inquiries	03	43%
Automated report generation	03	43%
Automated inbox organization and task management	02	29%
Automated meeting reminders and conference room bookings	04	57%
Automated transcription of voice calls into written notes	04	57%
Automated scheduling of travel and lodging arrangements	04	57%
Automated expense tracking and reimbursement	03	43%
Automated voice recognition for call answering	01	14%

According to findings most secretaries would love to see AI assisting in automated data entry and document creation (71%) while only 14% would like AI incorporating automated voice recognition for call answering. Other notable desires include automated scheduling , meeting reminders and transcription of voice calls into written notes (Table 9, Figure 9).
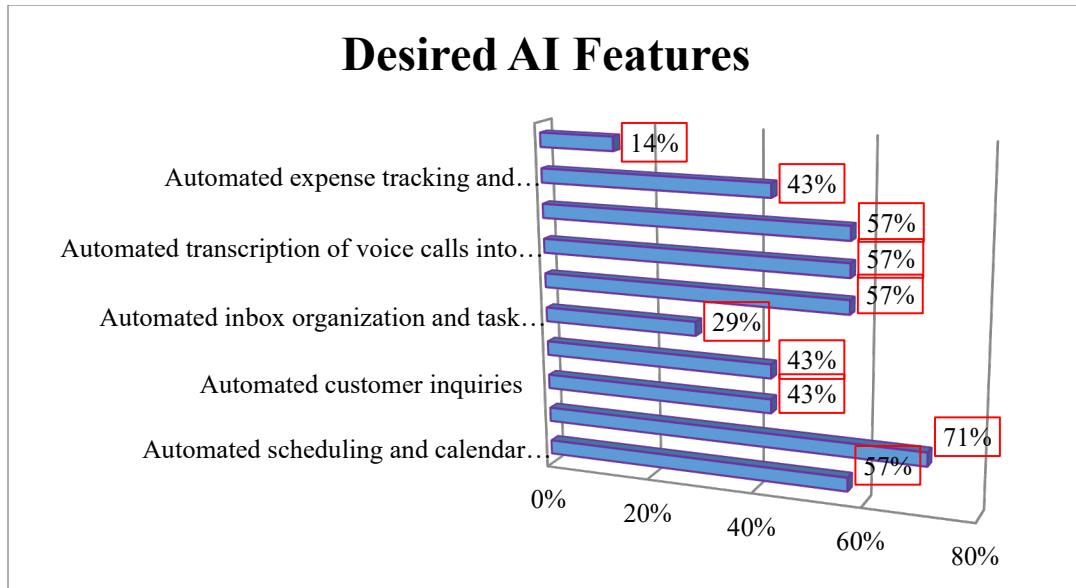
Desired AI Features

Figure 9. Desired AI Features

Automated data entry and document creation emerged as the most desirable feature of AI while automated voice recognition for call answering emerged as the least desirable.

Q10. How do you think AI will change the job of a secretary in the future? (Multiple Selection)

Table 10. How can AI Change the Job of a Secretary

Question	Response	Rate %
AI could automate tasks that were previously done manually by a secretary	06	85%
AI could replace some of the duties of a secretary with machines	04	57%
AI could speed up the workflow of a secretary	05	71%
AI could allow a secretary to focus more on creative tasks	04	57%
AI could improve accuracy when completing administrative tasks	05	71%
AI could provide more efficient customer service	02	29%
AI could automate mundane tasks and free up time for more pressing tasks	01	14%
AI could provide insights into data and analytics to better inform decisions	01	14%

The greatest number of respondents 85% felt that the most significant change that AI could bring to job of a secretary in future is automating tasks that were previously done manually yet the least would e providing insights into data and analytics to better inform decisions (Table 10, Figure 10).

How AI can Change Job Of Secretary

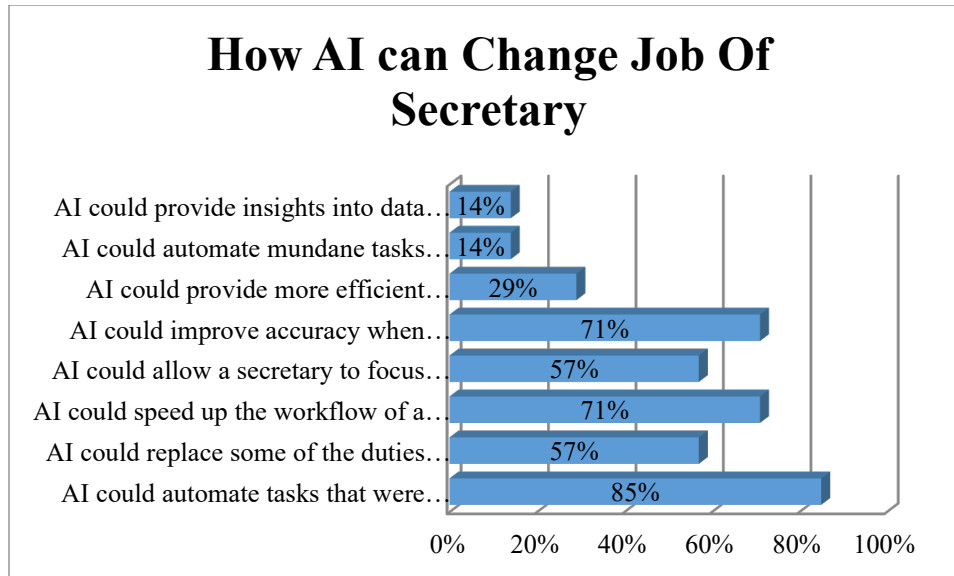| Category	Percentage
AI could provide insights into data…	14%
AI could automate mundane tasks…	14%
AI could provide more efficient…	29%
AI could improve accuracy when…	71%
AI could allow a secretary to focus…	57%
AI could speed up the workflow of a…	71%
AI could replace some of the duties…	57%
AI could automate tasks that were…	85%

Figure 10. How can AI Change the Job of a Secretary

The greatest number of respondents 85% felt that the most significant change that AI could bring to job of a secretary in future is automating tasks that were previously done manually yet the least would e providing insights into data and analytics to better inform decisions.

5.3 Proposed Improvements
Add propose improvements write here including additional numerical and graphical results (10 font)

5.3.1. What are the traditional roles of a secretary?
5.3.2. What are the roles of a secretary in an AI world?
5.3.3. What opportunities for the secretary could arise from AI?
5.3.4. What threats may AI bring to the job of a secretary?

5.4 Validation
Only 14% of the respondents claimed to be familiar with AI this is a clear indication that a lot of workers in the country are not familiar with AI. Given this level of unfamiliarity then it is certain that the impact is not very heavy, in terms of Ai, the nation of Zimbabwe is still very much in the embryonic stages. The county is still operating at the **Artificial Narrow Intelligence (ANI)** level, which is Weak AI– It, is capable of doing specific narrow tasks and focused on one narrow task. Calculator, Spell check, MS-Word, Netflix and Self driving cars with all its sensors/manuals/maps are good examples of ANI.

6. Conclusion
6.1. **Traditional roles of a secretary**
In Zimbabwe the roles of the secretary have remained significantly unchanged as they include the following:
- Answering and directing phone calls
- Organising and distributing messages
- Maintaining company schedules
- Organising documents and files
- Greeting business clients and guests
- Documenting financial information
- Maintaining and ordering office supplies
- Scheduling meetings and conferences
- Supervising staff and new employees

- Coordinating with other organisations
- Implementing administrative procedures

6.2. Roles of a secretary in an AI world
The roles and duties of the secretary in Zimbabwe have not shifted significantly from the traditional roles highlighted in 6.1 above. This lack of reasonable shift from the traditional roles as mainly because only **Artificial Narrow Intelligence (ANI)/Weak AI only** capable of doing specific narrow tasks and focused on one narrow task is readily available for secretaries in the country today. Calculator, Spell check, MS-Word, Netflix and Self driving cars with all its sensors/manuals/maps are good examples of ANI. The secretary is still expected to answer and direct calls as well maintaining diaries above documenting all records. Other duties remain as scheduling meetings maintaining as well ordering office supplies.

6.3. Opportunities for the secretary that could arise from AI
Apart from the threats that were discussed below, AI actually offers more opportunities for the secretary that can easily outweigh the threats. These opportunities are:
- Improved accuracy
- Opportunity to focus on other pressing issues of work as AI does all routine work.
- AI can speed up work flow thereby saving valuable time.
- Tasks such as document generation that were traditionally done manually could be automated.

6.4. Threats AI may bring to the job of a secretary.

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Biography

Wilson Takavadii Nyamanhindi lives in Harare, Zimbabwe where he works as lecturer at Harare polytechnic. He lectures Communication and Management and is also the Head of Department in the School of Office Management at the same institution. The School of Office Management trains Office Mangers (Secretaries) and is the largest in Zimbabwe amongst all polytechnics. He is a keen scholar and has a passion for research particularly in the fields of Communication, Leadership and Conflict Resolution as well as Management. He has made presentations at numerous International Research Conferences including the Association of Technical Universities and Polytechnics in Africa (ATUPA).