



2. Research Objective

- To analyze the impact of industrial revolutions that comprise of forth industrial revolution and artificial intelligence (AI) towards labour demand specifically in Asia regions.

1. Problem Statement

- The Fourth Industrial Revolution (IR4.0) will have positive and negative impacts on society, workplaces, vocations, and employee skills. Perspectives, debates, and research results on the intersection between growing technology and future employment. In-depth study may reveal significant variables that explain the relationship between IR4.0 and labor demand, especially in Asia.

3. Research Method

- Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) was adopted. There are four steps in the application of PRISMA process, including checking in existing literature, evaluating the eligibility of papers, involving extraction of details inside chosen articles, and finally, the step is connected to the summary of articles.
- From Figure 1, 28 papers related to industrial revolution, forth industrial revolution, artificial intelligence, labor demand in Asia region countries was chosen between year 1970 and 2020 and were checked and summarized in terms of different viewpoints, including the name of the author, title, subject relevant to the main purpose, year of publishing, techniques, data collection, indicators, the chosen and related field of Web of Science Categories (by record count).

4. Results

1. Trend of Change

- From the first to the fourth industrial revolution, significant improvements were made in technology, company model, economic development, and labor market. Many nations worldwide are still striving to evolve to the fourth industrial revolution.
- In sectors like manufacturing, replacing human workers with AI has a significant effect on labor demand and employment.
- The IR4.0 is intended to be a supply-side miracle, improving both productivity and production. Human capital is favorably related to technological innovation and improves the ability to absorb new technologies.

2. Affected Industries & Nations

- In this age, some industrialized nations like Japan have already prepared for these changes by educating their people on high-tech innovations. The fourth industrial revolution has left certain nations behind.
- Due to manpower constraints in Malaysia and Thailand, FDI companies may use industrial automation or other labor-saving technology to increase market share.
- By 2035, AI will have replaced almost two-thirds of a billion jobs in China, leaving one-third of the population jobless (342 million) By 2049, AI will have replaced 275 million Chinese workers, or 35.8% of the total workforce.
- Manufacturing has grown the economy in Singapore, with workers' wages rising by 0.4%. Unlike in China, where 40 robots per 10,000 workers, the widespread use of artificial intelligence in automated equipment may affect employment.
- Due to a shortage of workers, new technologies like AI that benefit impoverished countries will lag behind. So the education sector will be less in demand.

3. Policy Implication

- Legislator on IR4.0 aims to steer socioeconomic transformation through the use of technology and increase the country's readiness in making use of IR4.0 and transforming into a high-income nation through its use.

4. Leadership & Future Skills in IR4.0

- Employers have to demonstrate sufficient leadership in placing enough tools to support IR4.0 programs and equip workers with the right expertise.
- Teams and quality management methods will emphasize innovative thinking. Employee self-efficacy, expectation, and acknowledgment of change are crucial for IR4.0

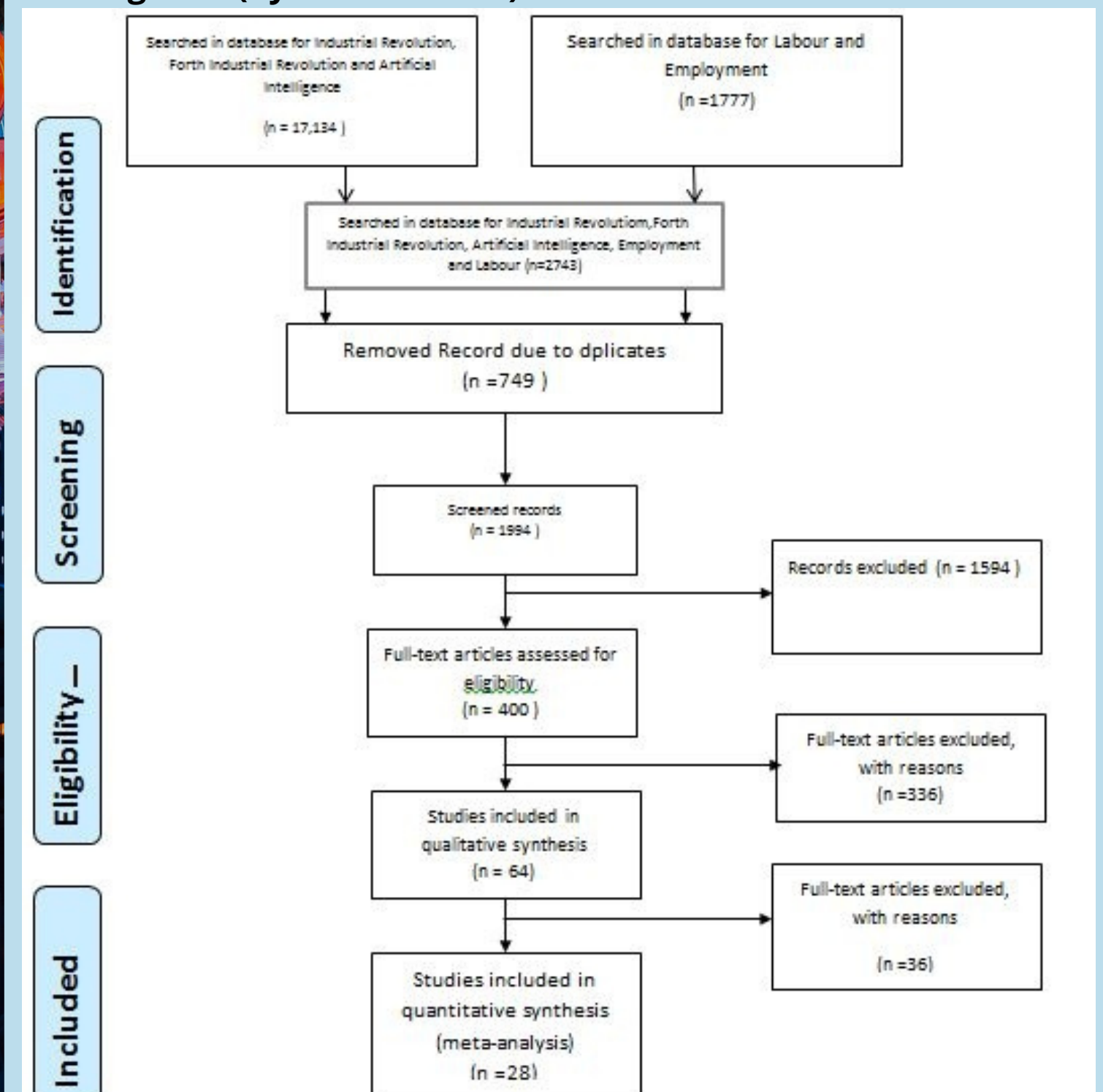


Figure 1: Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) method

5. Conclusion

- The effect of the IR4.0 on labor demand and employment in Asia regions bring positively and negatively impact.
- Some argue that artificial intelligence would simplify human labor, while others argue that it will reduce human worker job opportunities.
- Automation and AI have aided today's economic and social growth. AI is widely used in manufacturing, automotive, and programming sectors owing to its labor-saving capabilities hence expected more workers to be replaced by AI.



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