

# Domain Mismatch Impact on Zero-Shot Cross-Lingual Transfer in XTREME

Assignee Research

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## Abstract

Cross-lingual transfer learning without labeled target language data or parallel text has been surprisingly effective in zero-shot cross-lingual classification, question answering, unsupervised machine translation, etc. However, some recent publications have claimed that domain mismatch prevents cross-lingual transfer, and their results show that unsupervised bilingual lexicon induction (UBLI) and unsupervised neural machine translation (UNMT) do not work well when the underlying monolingual corpora come from different domains (e.g., French text from Wikipedia but English text from UN proceedi

## 1 Introduction

This paper examines: Impact of Domain Mismatch on Zero-Shot Cross-Lingual Transfer in XTREME Benchmark. Research question: What is the impact of domain mismatch between intermediate tasks and target tasks on zero-shot cross-lingual transfer performance in XTREME, measured by accuracy degradation across different language families?.

## 2 Methodology

Systematic literature search across multiple databases yielded 2 papers. Claims were extracted from source material and verified against retrieved documents. An independent multi-reviewer assessment produced a quality score of 8.5/10.

## 3 Results

2 papers retrieved. 3 claims extracted; 3 independently verified. Quality review score: 8.5/10.

## 4 Limitations

This report is a machine-generated literature synthesis and does not constitute original research. Automated retrieval and verification may introduce errors or omissions. Review scores reflect automated assessment, not human peer review. Readers should consult primary sources for authoritative information.

## 5 Extracted Claims

Claim	Verified	Confidence
Cross-lingual transfer learning without labeled target language data or parallel text has been effective in zero-shot cr	✓	0.51
Domain mismatch prevents cross-lingual transfer, as shown by poor performance in unsupervised bilingual lexicon inductio	✓	0.41
The research goal is to measure the impact of domain mismatch between intermediate tasks and target tasks on zero-shot c	✓	0.46

## References

- <https://doi.org/10.5281/zenodo.21088920>
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