

An Acoustic Phonetic Analysis of Six Major Accents of Urdu in Pakistan

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Introduction

- ▶ Pakistan is a multilingual country as almost 60 different languages are being spoken.
- ▶ Urdu, Punjabi, Sindhi, Balochi, Pashto and Saraiki are majorly spoken languages (Rehman, 2002).
- ▶ Urdu is an official and National language of Pakistan (Mahmood, 2004) but the accent, lexicon and prosody vary across geographical areas.

Accent Variation

- ▶ Accent variation could mark the identification of a person as a member of a specific geographical, socio-economic, ethnical group and also identify first language of a speaker.

Methodology

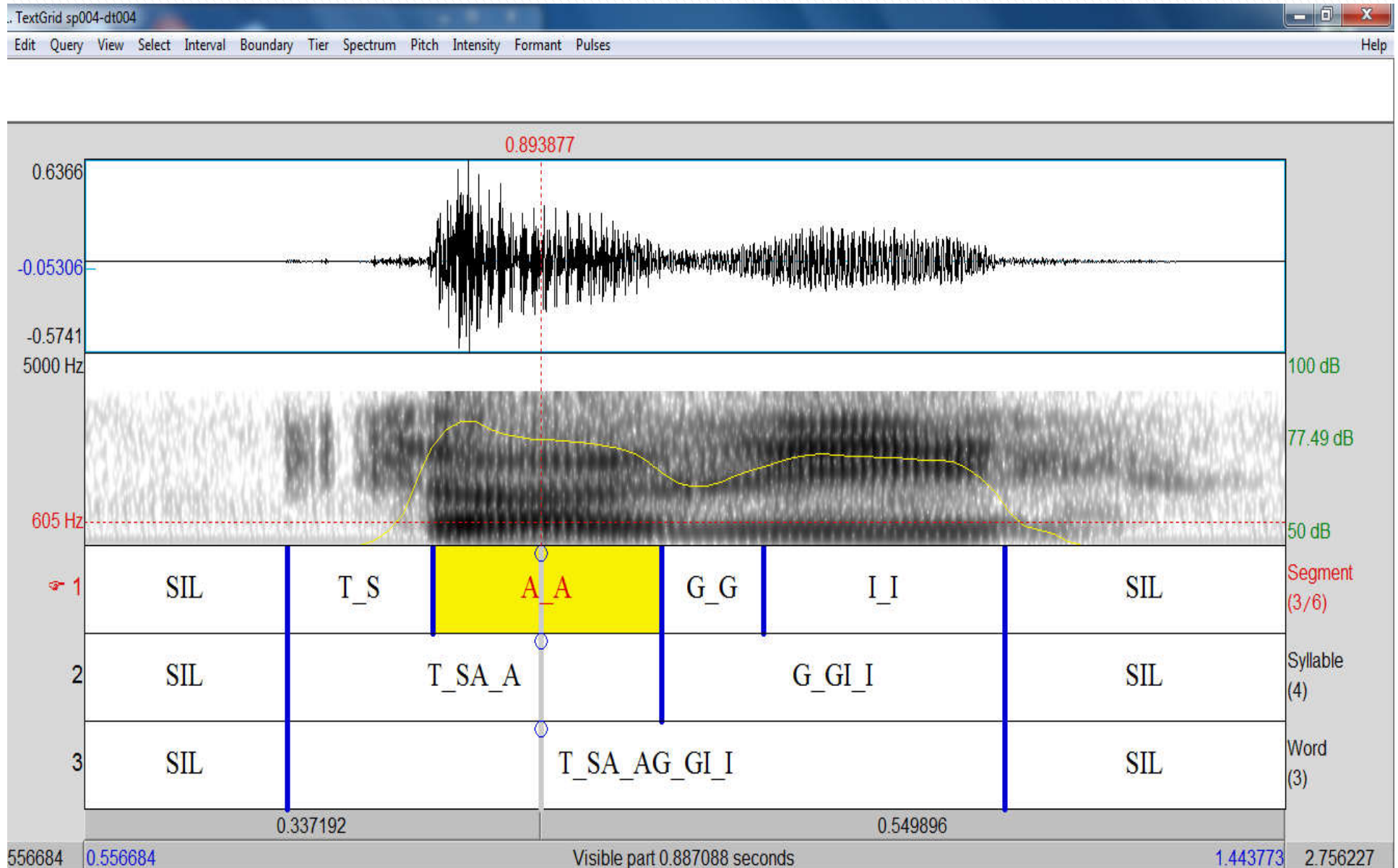
Statement of the Problem	This study investigates whether the accents of different languages affect Urdu language.
Nature of the Study	Quantitative Research
Population	Male female speakers of six majorly spoken languages in Pakistan
Sampling	30 speakers of each language
Nativeness	Based on speakers' response and not on geographical locations
Instrument	Acoustic analysis of Corner Vowels in PRAAT
Corpus	List of 139 district names of Pakistan
Data	30 (instances of each) Unstressed Corner Vowels from the Wave Files
Data Analysis	Comparison of Vowels' quality by using Formant Frequencies; F1, F2

An Acoustic Phonetic Analysis of Corner Vowels

**Formant Frequencies;
F1, F2**

Loud Acoustic Signals
(Dark Bands)

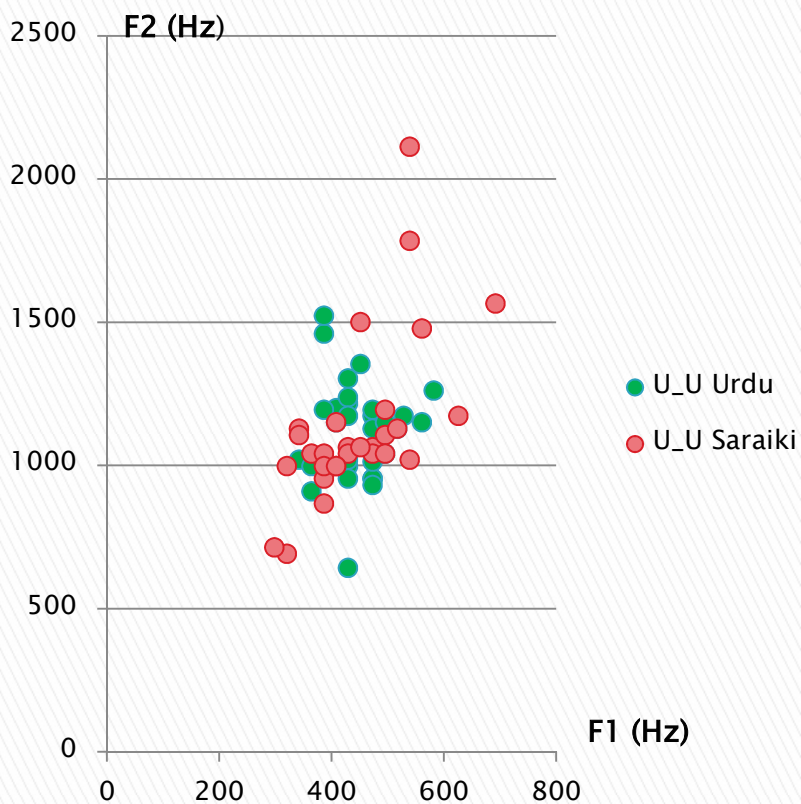
Measuring Formant Frequencies of Vowels



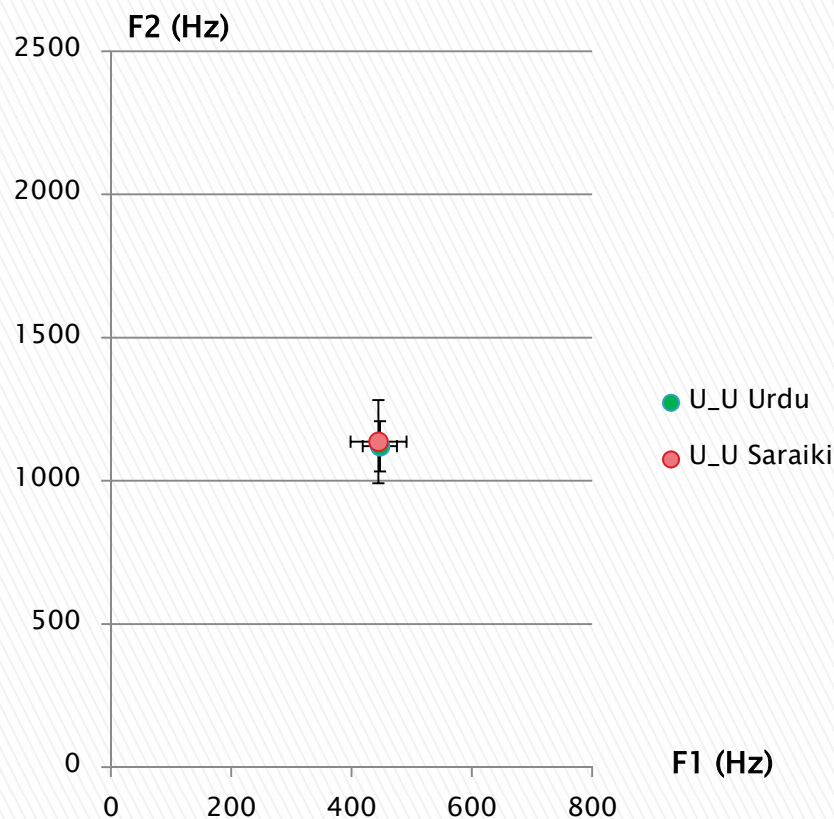
Mean and Std. Deviation of F1, F2 of Six Languages

	I_I		A_E		A_A		U_U	
	F1	F2	F1	F2	F1	F2	F1	F2
Urdu Mean	417	2302	563	1732	684	1385	447	1120
Urdu Std. Dev.	28	194	35	225	55	105	28	87
Punjabi Mean	412	2364	566	1653	750	1304	447	1096
Punjabi Std. Dev.	24	166	53	173	65	58	38	62
Sindhi Mean	470	2496	521	1936	686	1595	530	1331
Sindhi Std. Dev.	47	209	34	247	76	137	45	176
Balochi Mean	403	2163	501	1800	667	1400	424	1307
Balochi Std. Dev.	39	142	50	141	63	104	26	221
Pashto Mean	427	2183	508	1943	629	1355	423	2032
Pashto Std. Dev.	24	135	36	158	39	54	24	229
Saraiki Mean	446	2271	500	1919	639	1394	444	1136

Pair wise Comparison of U_U Vowel (uttered by Urdu and Saraiki Speakers)

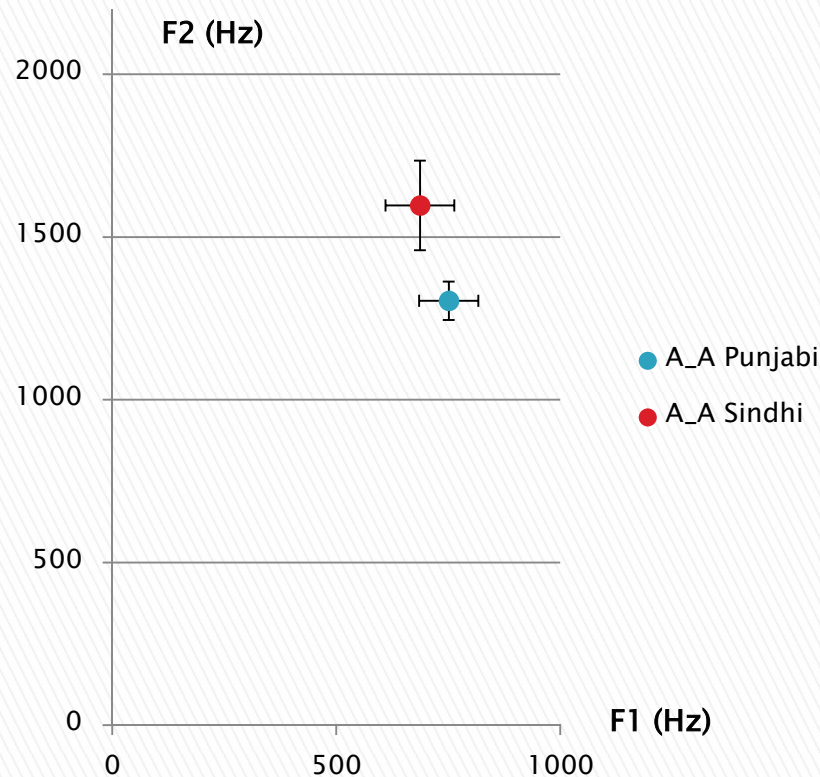
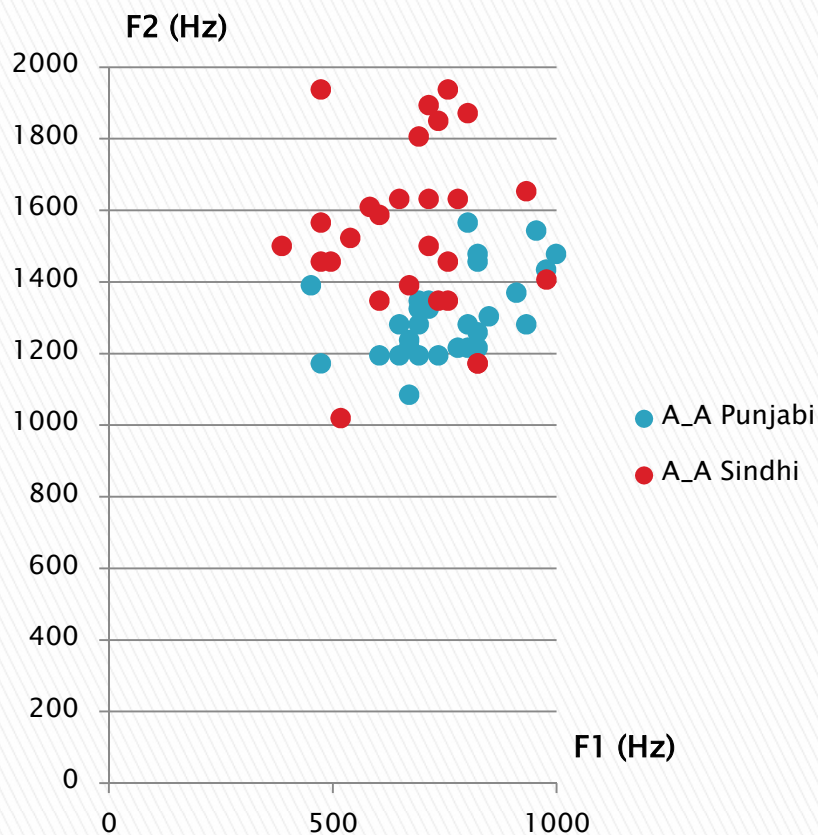


Multiple Instances of U_U Vowel by Urdu and Saraiki Speakers



Mean Value comparison of U_U Vowel

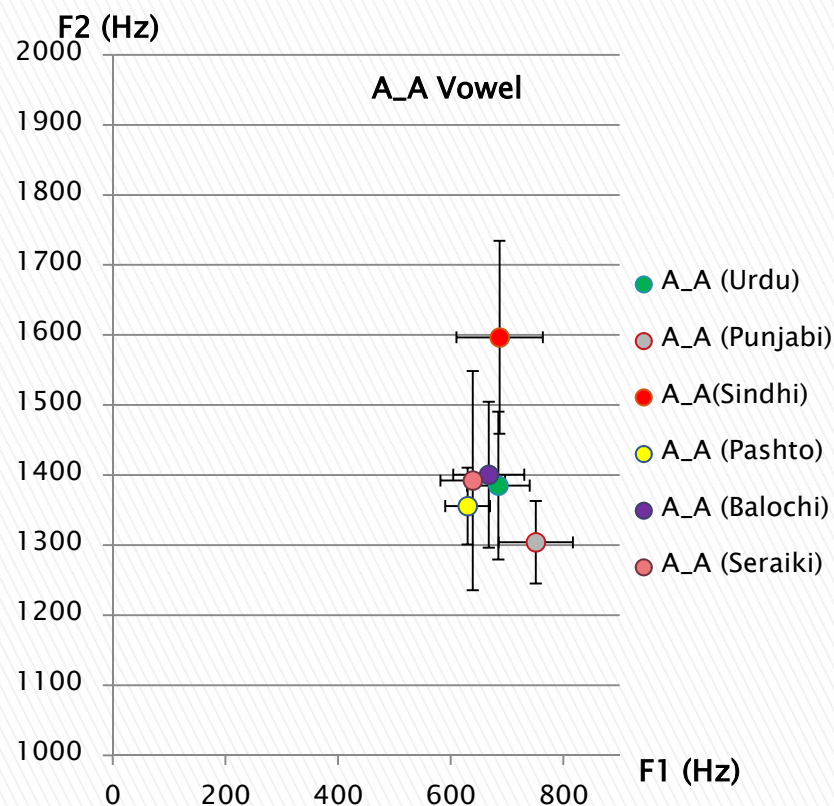
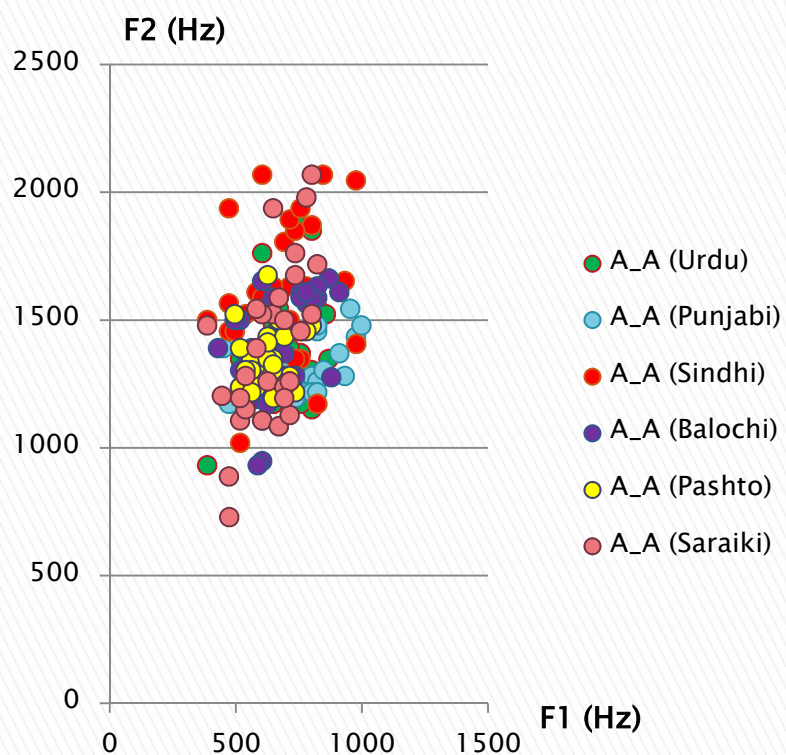
Pair wise Comparison of A_A Vowel (uttered by Punjabi and Sindhi Speakers)



Multiple Instances of A_A Vowel by Punjabi and Sindhi Speakers

Mean Value comparison of A_A Vowel

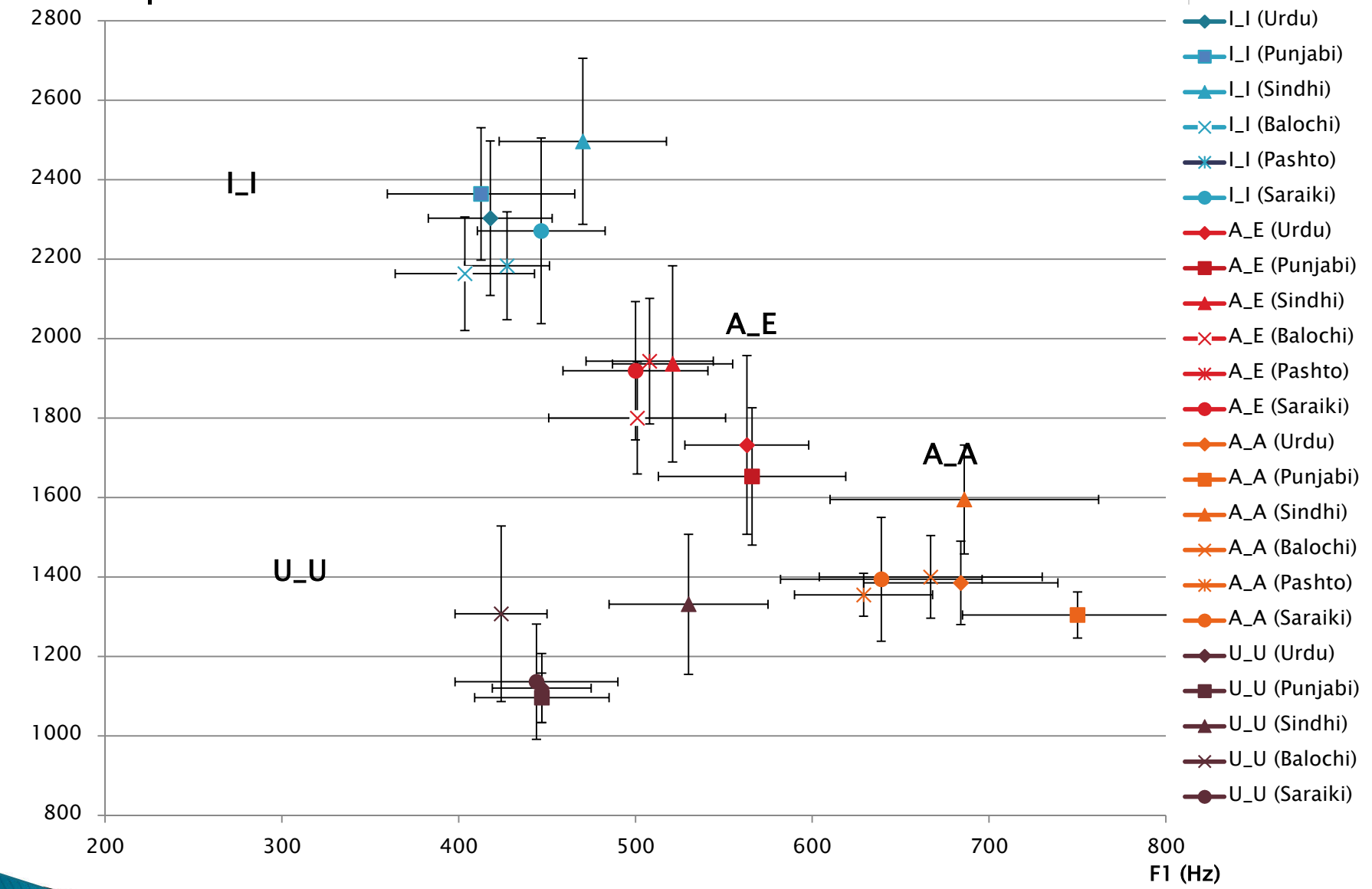
Group wise Comparison of A_A Vowel Uttered by the Speakers of Six Language



Multiple Instances of A_A Vowel uttered by the Speakers of Six Language

Mean Value comparison of A_A Vowel

An Acoustic Phonetic Analysis of Six Major Dialects of Urdu in Pakistan



Conclusion

After analyzing the data, it is concluded;

- ▶ Comparison of all vowels uttered by the speakers of six major languages shows that all the corner vowels are majorly or minorly different from each other.

Recommendations & Future Directions

- ▶ The acoustic analysis of consonantal inventories and other vowels are still in need to study in future.
- ▶ Supra segmental features of phonetic inventories are still undetermined.

References

- ▶ Mahmmod S. Mahmood, 2004. *The Constitution of the Islamic Republic Pakistan*. Retrieved 2013-03-01. From <http://www.mofa.gov.pk/Publications/Constitution.pdf>
- ▶ Rehman T., 2002. *Language policy, multilingualism and language vitality in Pakistan*. Retrieved from http://www.sil.org/asia/ldc/parallel_papers/tariq_rahman.pdf
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Thank You