

# **INTERNATIONAL STUDENT ANALYTICS AND FORECASTING MODEL (ISAFM)**

**ISAFM Version 3 Release Session**

**EAIE 2012 Conference**

- **The presentation was delivered by ICG at the 2012 EAIE conference in Dublin on 13 September 2012.**
- **The presentation shall be considered incomplete without oral clarification.**
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## Welcome

**ISAFM Team**

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**ISAFM Methodology**

**ISAFM Forecast (v1.1)**

**ISAFM Forecast (v1.1-2)**

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**ISAFM Forecast (v1.1-3)**

**Discussion**

- **Dr. Daniel J. Guhr**

- **Dr. Guhr serves as ICG's Managing Director. Prior to founding ICG, he served as a strategy consultant with the Boston Consulting Group and as a Director of Business Development with SAP in Silicon Valley.**

- **Alexander Lundberg, M.Sc.**

- **Mr. Lundberg recently graduated with a M.Sc. in Econometrics and Mathematical Economics from the London School of Economics. He served as the 2011-12 Quantitative Analyst with a focus on ISAFM.**

- **Mauro Mondino, MPP**

- **Mr. Mondino serves as the Head of ICG's Research Team. Prior to joining ICG, he served as the International Officer of the JEF Italy Executive Bureau where he worked on civil society organizations and institutional reform in Europe.**

- **Andrea A. Abel, Ph.D.**

- Ms. Abel completed her Ph.D. in Political Science at Stanford University. She holds a M.A. in Political Science from Stanford University, as well as an M.Eng. in Mechatronic Engineering and B.Sc. degrees in Aerospace Engineering and Commerce from the University of Sydney.

- **Michael Bailey, Ph.D.**

- Mr. Bailey is pursuing a Ph.D. in Economics at Stanford University with a focus on applied econometrics. At Stanford, he has taught or co-taught courses in corporate strategy and microeconomic theory.

- **Carlos Fernandez-Granda, Ph.D. '13**

- Mr. Fernandez-Granda is working on a Ph.D. in Electrical Engineering at Stanford University. He holds a M.Sc. in Applied Mathematics from the École Normale Supérieure in Paris, a Master's in Civil Engineering from the École des Mines in Paris, and was also educated in Electrical Engineering and Computer Science at the Universidad Politécnica.

- **Orhun Aydin, Ph.D. '16**

- Mr. Aydin is pursuing a Ph.D. in Petroleum Engineering at Stanford University. He holds a M.Sc. From Stanford University and a B.Sc. in Petroleum and Natural Gas Engineering from the Middle East Technical University.

- **Bjorn Einar Aas. Senior Advisor in the Department of Research Management at the University of Bergen, Norway, and past President of the European Association for International Education.**
- **Dr. John E. Andersen. Director of International Affairs at the University of Copenhagen, Denmark, and chairman of the Danish Rectors' Conference Committee for International Relations.**
- **Britta Baron. Vice-Provost and Associate Vice President (International) at the University of Alberta, Canada.**
- **Paul Brennan. Vice-President for International Partnerships at the Association of Canadian Community Colleges, Canada.**
- **Prof. Sheila Embleton. Former Vice-President (Academic) and Provost at York University, Canada.**
- **Dr. Andy Gillespie. Assistant Provost for International Programs at Auburn University, USA.**
- **Prof. Nigel Healy. Pro Vice-Chancellor at Nottingham Trent University, UK.**

# ISAFM ADVISORY BOARD MEMBERS (II)

- **Markus Laitinen.** Head of International Affairs at the University of Helsinki, Finland.
- **Sonny Lim, JD.** Director of International Relations at Nanyang Technological University, Singapore.
- **Chris Madden.** Pro Vice-Chancellor (International) at Griffith University, Australia, and Steering Committee as well as Board of Directors member of APAIE.
- **Joy McKinnon, DBA.** Vice President of Business Development at Algonquin College, Canada.
- **Dr. Randall Martin.** Executive Director of the British Columbia Council for International Education, Canada, and former Director of SFU International.
- **Gonzalo Peralta.** Executive Director of Languages Canada, Canada, and past President of the Association de l'industrie de la langue.
- **Prof. Chris Robinson.** Associate Dean, International at Victoria University, Australia, and the inaugural Managing Director of Universitas 21.
- **Richard Stenelo.** Director of Commissioned Education at Lund University, Sweden.
- **Delia de Vreeze.** International Marketing Manager at Wageningen University, Netherlands, and General Council member of the EAIE.

- **System Dynamics Group at the University of Bergen (Prof. Pål Davidson)**
  - **Prof. Pål Davidsen serves as Professor of System Dynamics at the Department of Geography at the University of Bergen (UiB). He is a former president of the System Dynamics Society. Prior to that, he held adjunct faculty positions at Chalmers University, Mikkeli Polytechnic Institute, the Massachusetts Institute of Technology, and the University of Karlstad.**

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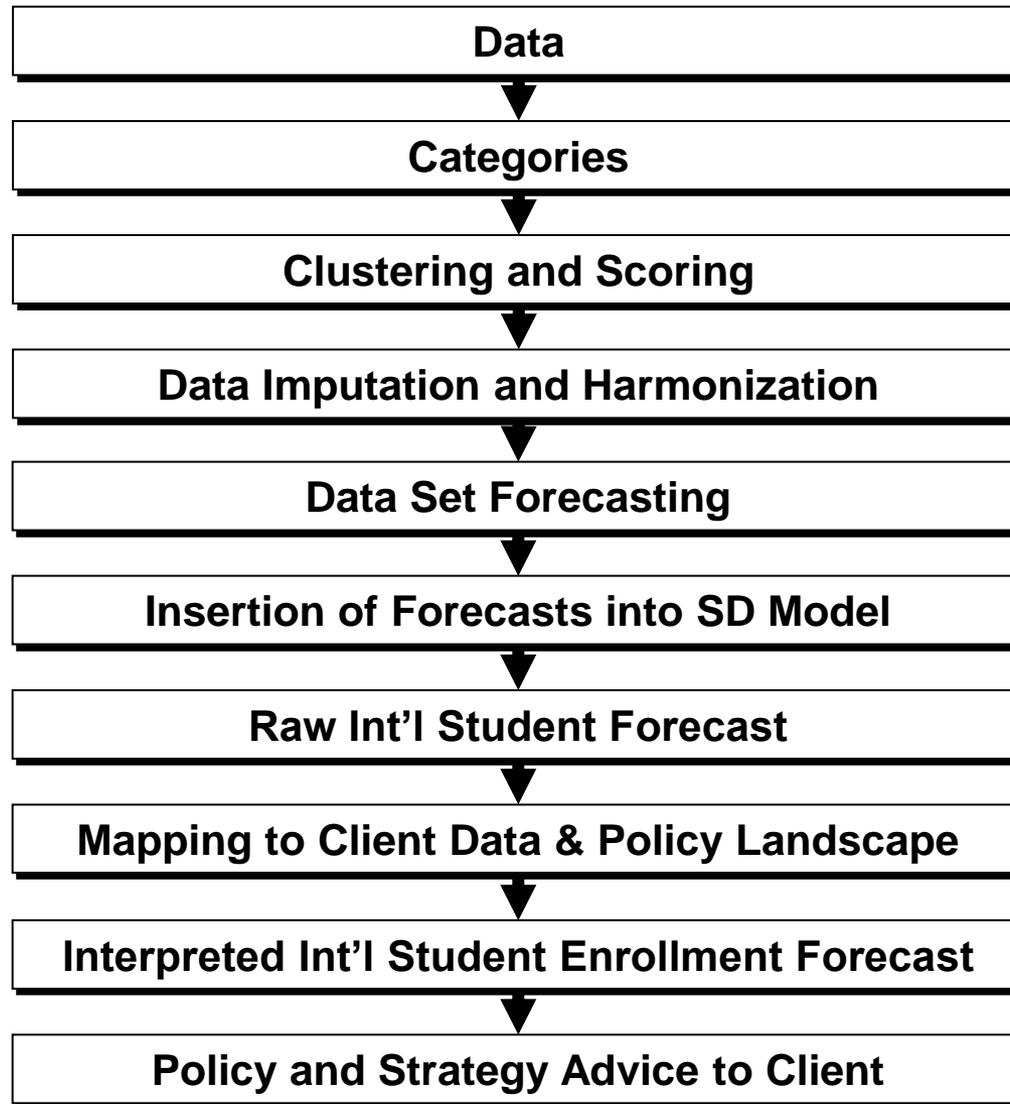
**ISAFM Forecast (v1.1)**

**ISAFM Forecast (v1.1-2)**

**ISAFM Forecast (v1.1-3)**

**Discussion**

- **Core vision**
  - **To create an integrated analysis and forecasting tool that allows for a concise, systematic, evidence-based modeling of international student flows at a national, state/provincial, as well as at an institutional level.**
- **ISAFM's intended usage and client service focus on**
  - **Its role as a strategic enabler – ISAFM facilitates an evidence-based understanding of population, market, competition, and performance metrics at an in-depth, unbiased level.**
  - **Its function as a student recruitment support mechanism – ISAFM augments, adds, corrects, and supplements a client's knowledge base, and assists with resetting policies and practices.**
  - **Its ability to operate with in-depth client data (through mapping) and to focus on immigration, talent segments, or target markets, at a granular level.**
  - **Its focus on an actionable time horizon – ISAFM operates with rolling 12 months “current data” and 36 months “forecast data” timelines.**



- **ISAFM's underlying data model is built on more than 2 million data points.**
- **Data reflects demographic, economic, education, performance, and visa and immigration data from 64 key countries starting in the year 2000.**
- **Many data categories capture data worldwide.**
- **Client data is handled separately from the above data.**
- **Client data confidentiality is safeguarded through a number of measures, including restricted access rules.**

**Client data can add many 100,000s of data points**

- **The basis of ISAFM is an extensive, longitudinal, and granular collection of relevant data which generates, conditions, impacts, and modulates international student movements.**
- **ISAFM is based on five major data categories**
  - 1) **Demographics**
  - 2) **Economics**
  - 3) **Education**
  - 4) **Performance**
  - 5) **Visa and Immigration**
- **Each category captures a range of variables, with total variables captured within the core data model exceeding 120.**
- **Client data is inserted into the core data model. In some instances, such data can exceed 100,000 (student) segments.**

- **Introduction to Scenarios**

- **Scenarios are based on a defined set of events already or potentially impacting international student flows. While, in theory, the definition of scenarios can be broad and amorphous, in practice scenarios are tightly defined to allow the modeling of impact factors.**
- **Scenarios form a crucial part of ISAFM because they allow adjusting for real-life variations to the baseline, system dynamics-generated forecast. Scenarios can cover existing and/or emerging events or reflect on the likely impact of hypothetical events.**

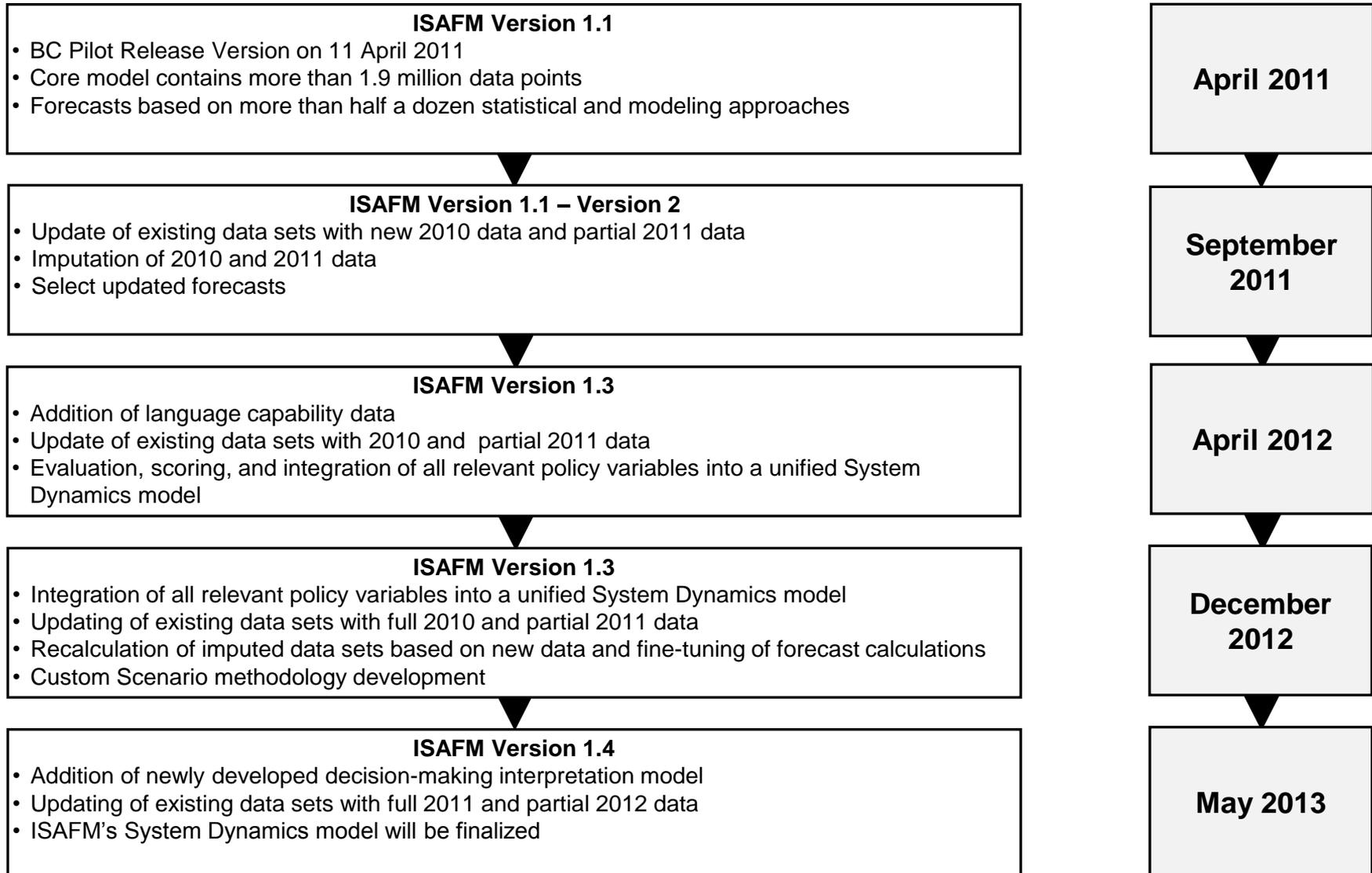
- **Scenario Calculation**

- **Scenarios are based on the transformation of qualitative and quantitative data into business rules. These rules are computed in multi-variable regression models in order to achieve the necessary sensitivity to disruptive events.**

- **Scenario Provision**

- **ISAFM operates on a set of base scenarios. Clients can request customized scenarios.**

# ISAFM DEVELOPMENT STAGE AND FUTURE DEVELOPMENT DIRECTIONS (SCHEMATIC)



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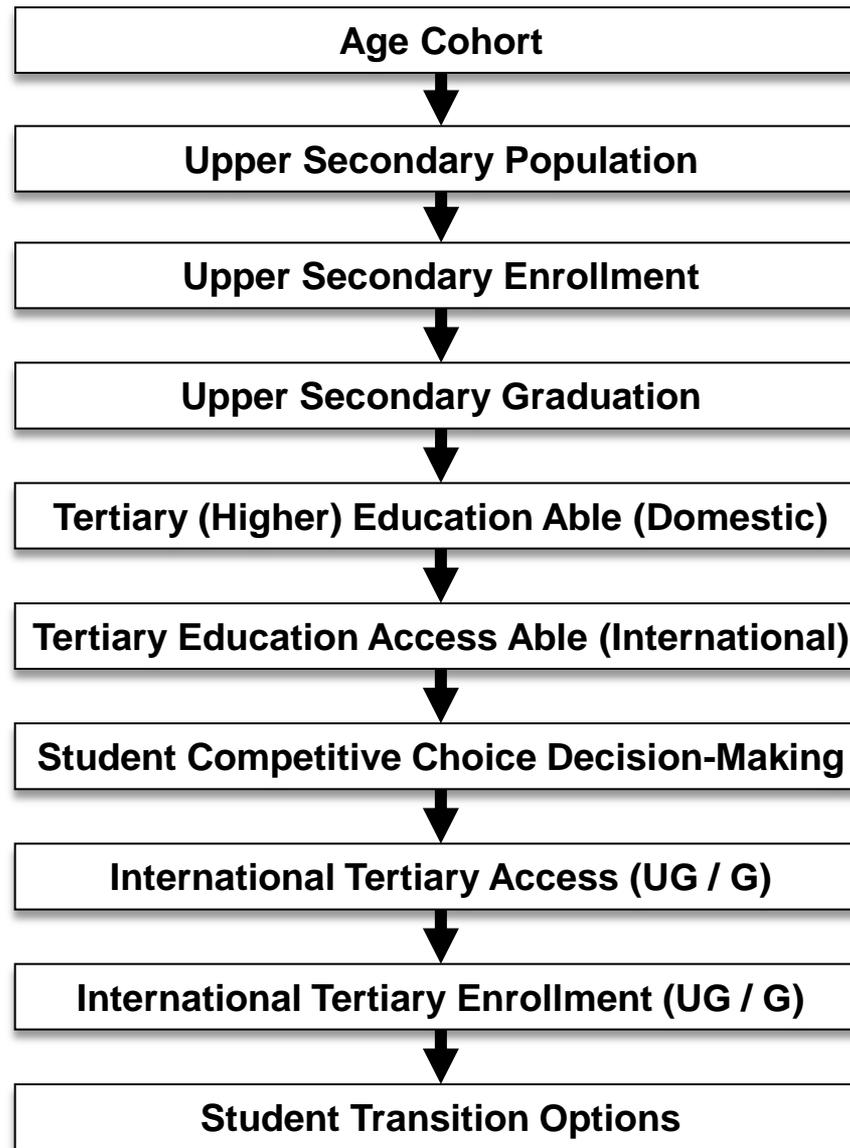
**ISAFM Forecast (v1.1)**

**ISAFM Forecast (v1.1-2)**

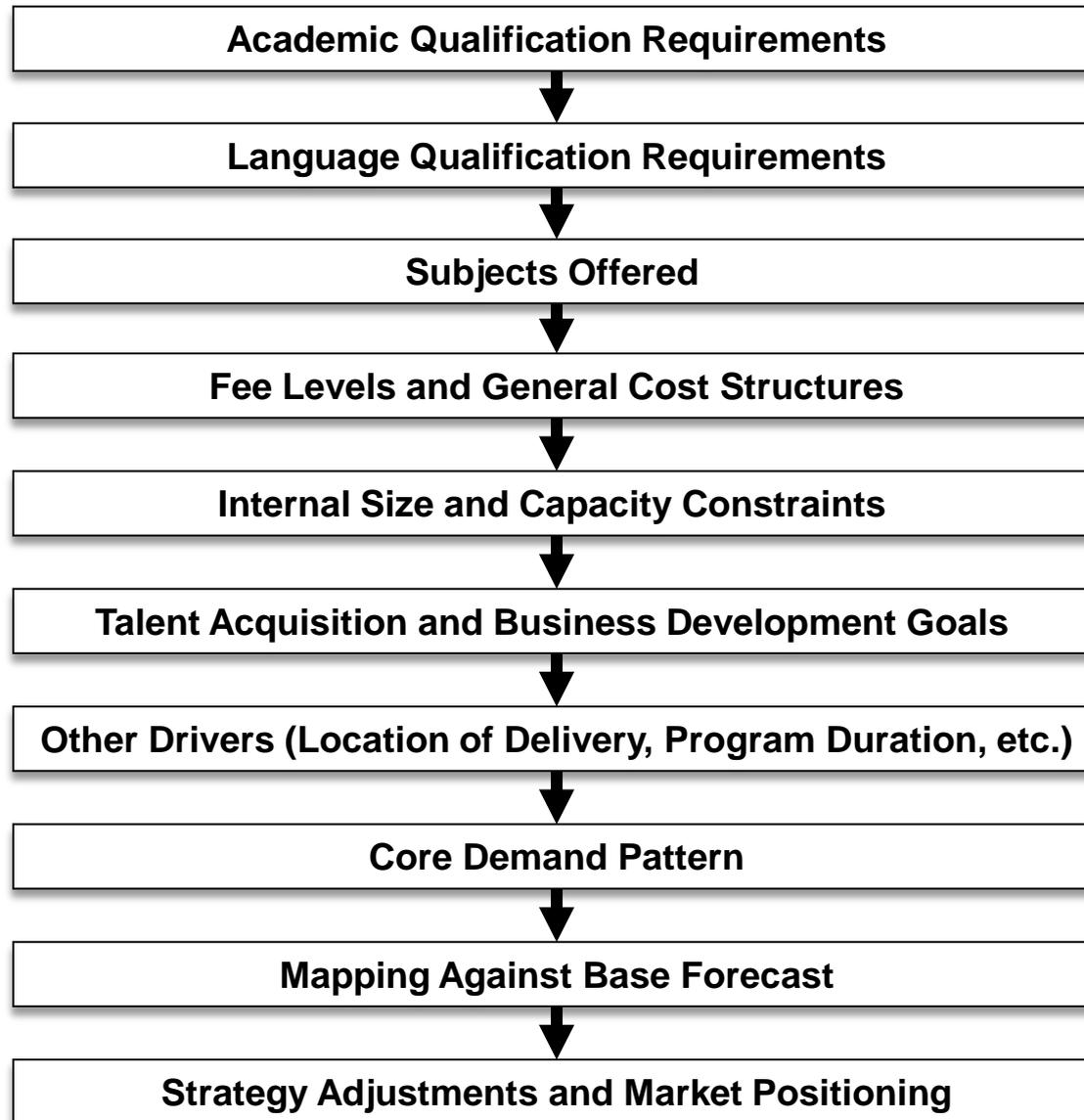
**ISAFM Forecast (v1.1-3)**

**Discussion**

# STUDENT FLOW MODEL (HIGH LEVEL SCHEMATIC)



# NATIONAL/PROVINCIAL/INSTITUTIONAL DEMAND MODEL (HIGH LEVEL VERSION)



- **Multifaceted approach to modeling and forecasting**
  - **Multivariate Regression**
    - **Dynamic Linear Regression**
    - **Panel Data Regression**
  - **Bayesian Analysis – Probabilistic Framework**
  - **System Dynamics**

- **Fit statistical models to historic data**
  - **Look-back period of 12 years (rolling)**
- **Estimate relationships between predictor variables and total international student enrollment**
- **Compute predicted values for future total international student enrollment**

- **Predictive power of models depends on model accuracy**
  - **Model accuracy depends, in part, on data availability and data quality**
    - **Lack of data**
    - **Incorrect, incomplete, or mis-specified data**
    - **Measurement units (“one” international student)**
- **Regression analysis shows correlation rather than causation**

- **Key challenge for ISAFM: Model differences between countries and the dynamic nature of the process makes it difficult to provide reliable and useful results.**
- **ISAFM captures the variability in enrollments over time, but also the variability between countries in a simple, yet not simplistic, framework.**
- **ISAFM employs several modeling methods, which are classified into two broad groups: “Push” and “Pull” models of enrollment.**

- **Several types of time series and panel data regression techniques are used to fit these models and generate the forecasts.**
- **The statistical analysis is derived from a theoretical model of international enrollments developed by the modeling team.**
- **The key assumption to these models is that the variation in the demographic, economic, education, performance, and visa and immigration variables can be used to predict variation in enrollments.**
- **Fitting a wide variety of models to ensure that results are robust to the specification of the statistical model.**
- **Modeling outbound student mobility alongside international enrollments and distinguishing how “push” and “pull” factors separately influence enrollments.**

# SYSTEM DYNAMICS

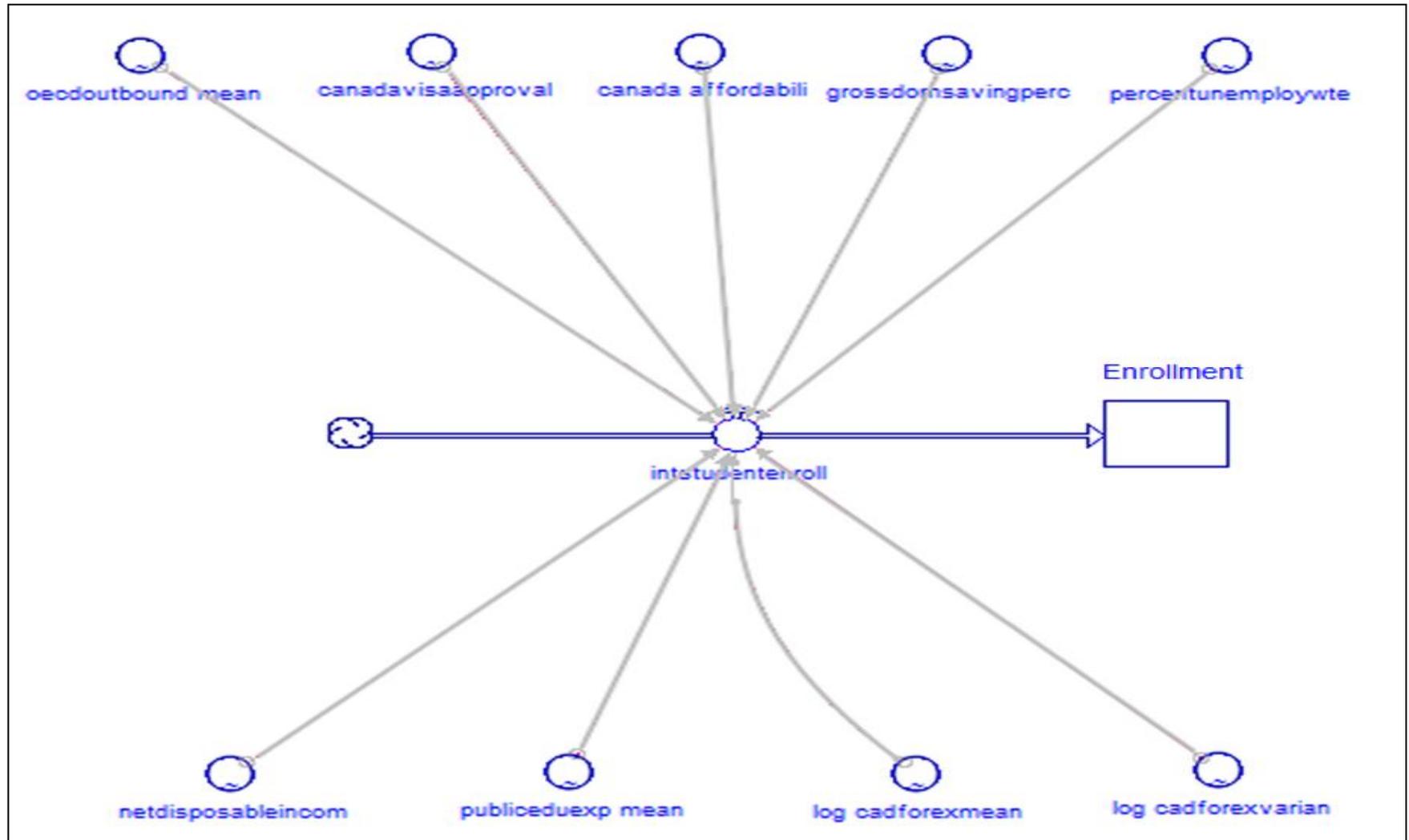
## Modeling Complex Real-World Systems

- **System Dynamics allows us to model interactions between elements of a complex system and reproduce its dynamic behavior.**
- **International student mobility: heterogeneous factors affecting the process are very challenging to characterize. Political, economic, historical and cultural considerations can be merged within the System Dynamics framework.**
- **System Dynamics is not an alternative to statistical modeling techniques. It complements them by incorporating additional variables calibrated, for instance, by specialists in the field.**

*“To omit such variables is equivalent to saying they have zero effect, probably the only value that is known to be wrong.” (Forrester, J. W. “Industrial Dynamics” 1961.)*

# SYSTEM DYNAMICS

## Basic Supply Flow Model



# SYSTEM DYNAMICS

## Modeling Complex Real-World Systems

- **The System Dynamics Model's causal effects are captured by a linear function with coefficients calculated by least squares fitting.**
- **The Model can incorporate more sophisticated functions. Several machine learning techniques are implemented and evaluated for this purpose.**
- **Testing is an integral part of the System Dynamics modeling process.**
- **An interface for sensitivity analysis is implemented in Stella and used to perform sensitivity analyses of the independent variables for each of the source countries.**

- **Further development steps include**
  - **Incorporating boundary constraints to enforce natural capacity limits for destination countries.**
  - **Combining statistical analysis and input from experts to quantify the interaction of relevant variables.**
  - **Further tests under a wide range of conditions.**
  - **Developing and calibrating a system dynamics model must be a joint effort involving careful quantitative analysis, exhaustive simulations and evaluations by experts.**

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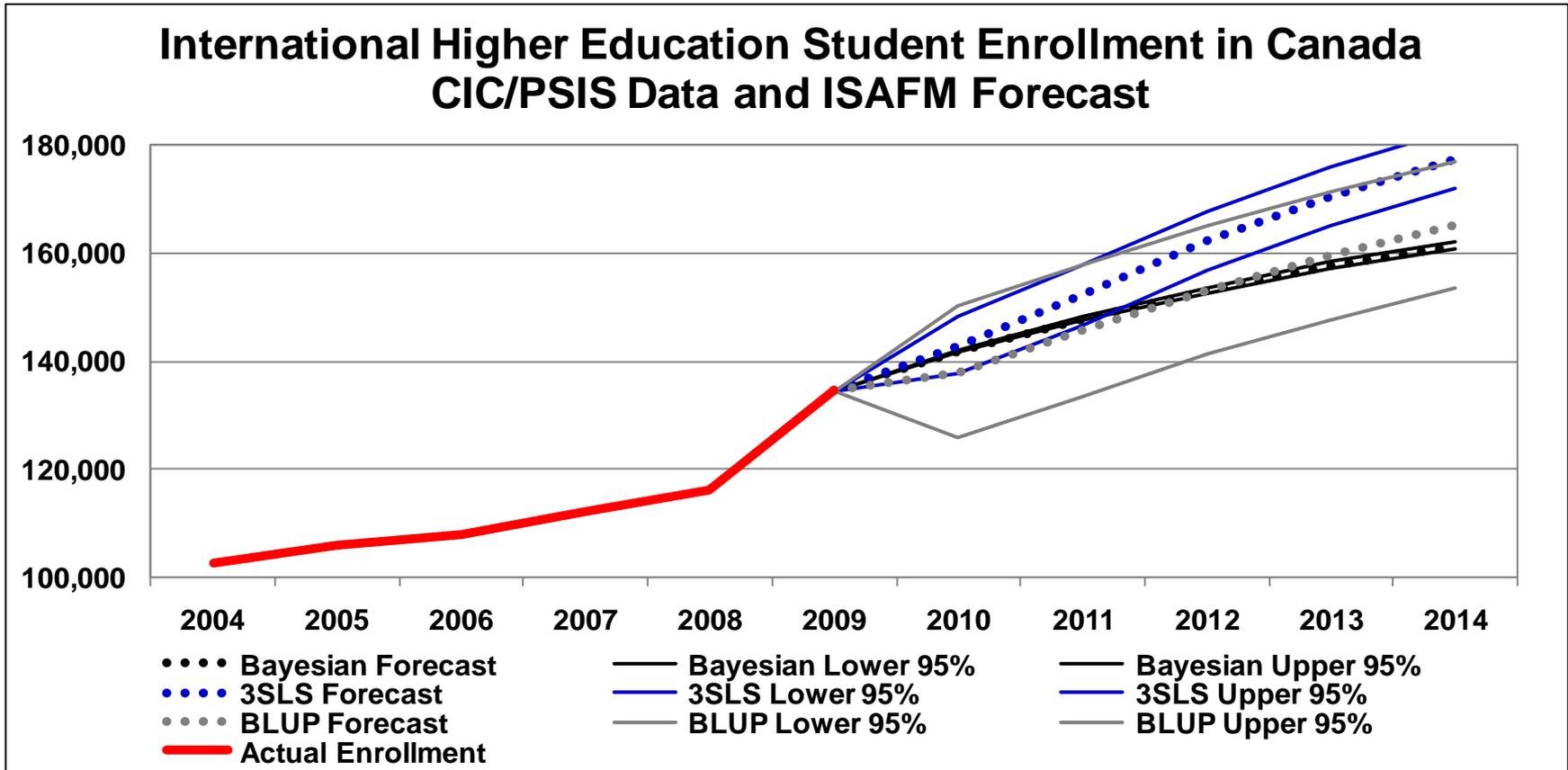
**ISAFM Forecast (v1.1-2)**

**ISAFM Forecast (v1.1-3)**

**Discussion**

# ISAFM FORECAST (VERSION 1): CANADA

## 95% Confidence Intervals



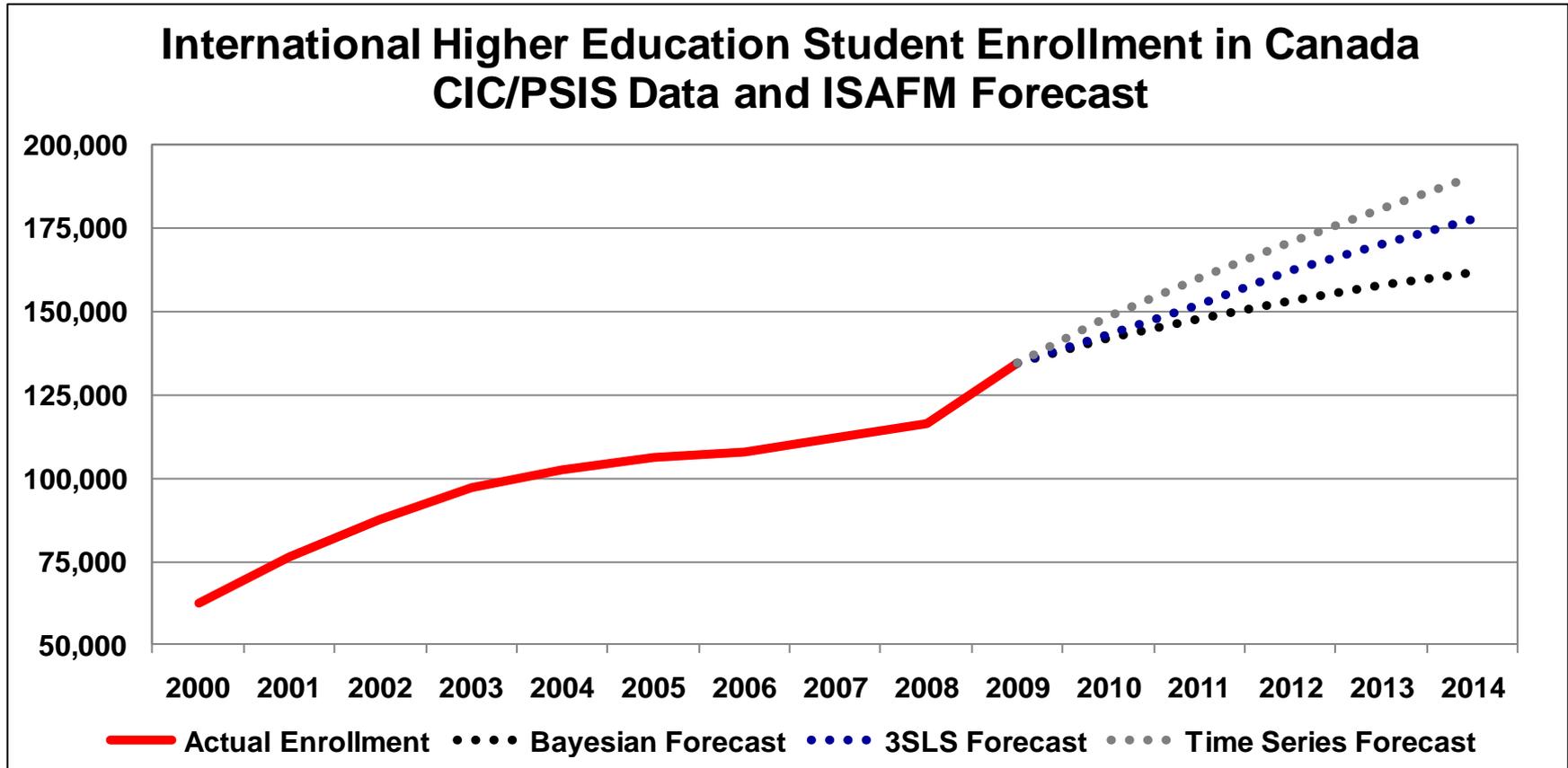
### A story of models, ranges, and confidence intervals

Notes: Actual enrollment data are based on both CIC total enrollments ("University" and "Other Post-Secondary" segments) and PSIS enrollment shares.

Sources: CIC, PSIS, ISAFM.

# ISAFM FORECAST (VERSION 1): CANADA

## Total International Higher Education Student Enrollment



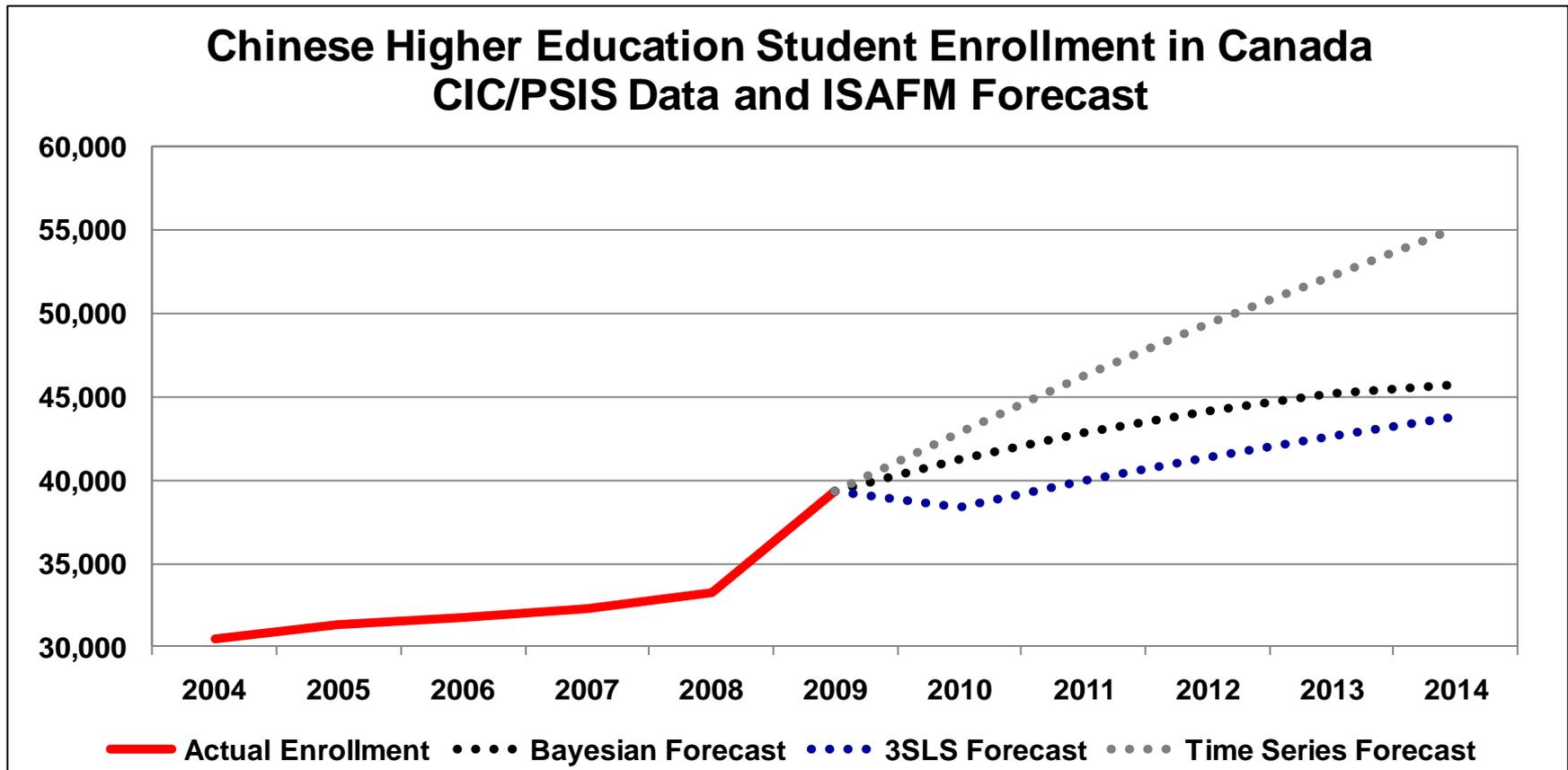
**Key perspective: Further growth**

Notes: Actual enrollment data are based on both CIC total enrollments ("University" and "Other Post-Secondary" segments) and PSIS enrollment shares.

Sources: CIC, PSIS, ISAFM.

# ISAFM FORECAST (VERSION 1): CANADA

## Chinese Higher Education Student Enrollment



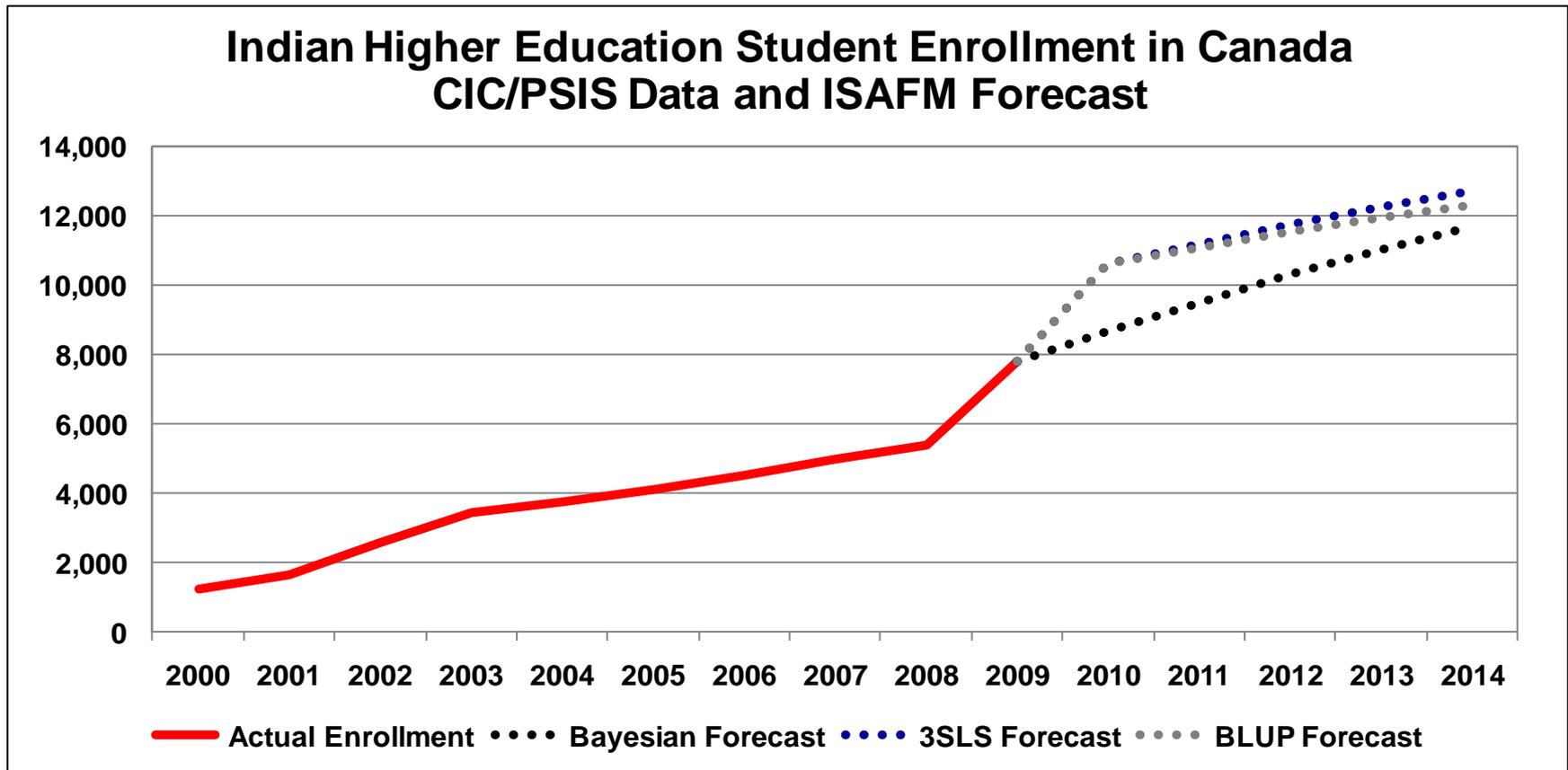
**Key perspective: Further growth, but big warning signs**

Notes: Actual enrollment data are based on both CIC total enrollments ("University" and "Other Post-Secondary" segments) and PSIS enrollment shares. Actual enrollment for 2000 through 2003 were excluded for illustration purposes.

Sources: CIC, PSIS, ISAFM.

# ISAFM FORECAST (VERSION 1): CANADA

## Indian Higher Education Student Enrollment



**Key perspective: Further growth, but a not a reflection of overall trends**

Notes: Actual enrollment data are based on both CIC total enrollments ("University" and "Other Post-Secondary" segments) and PSIS enrollment shares.

Sources: CIC, PSIS, ISAFM.

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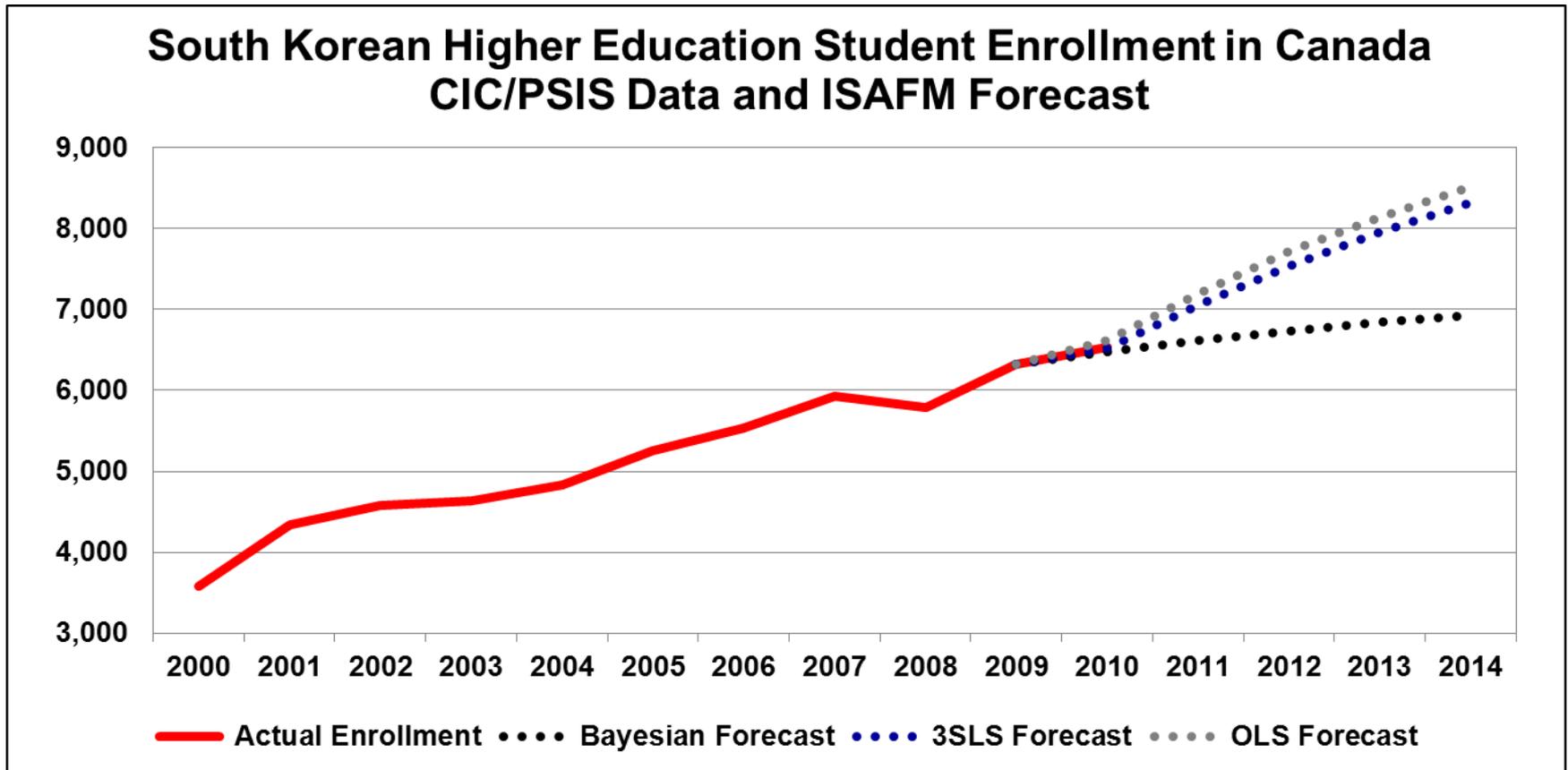
**ISAFM Forecast (v1.1-2)**

**ISAFM Forecast (v1.1-3)**

**Discussion**

# ISAFM FORECAST (VERSION 2): CANADA

## South Korean Higher Education Student Enrollment



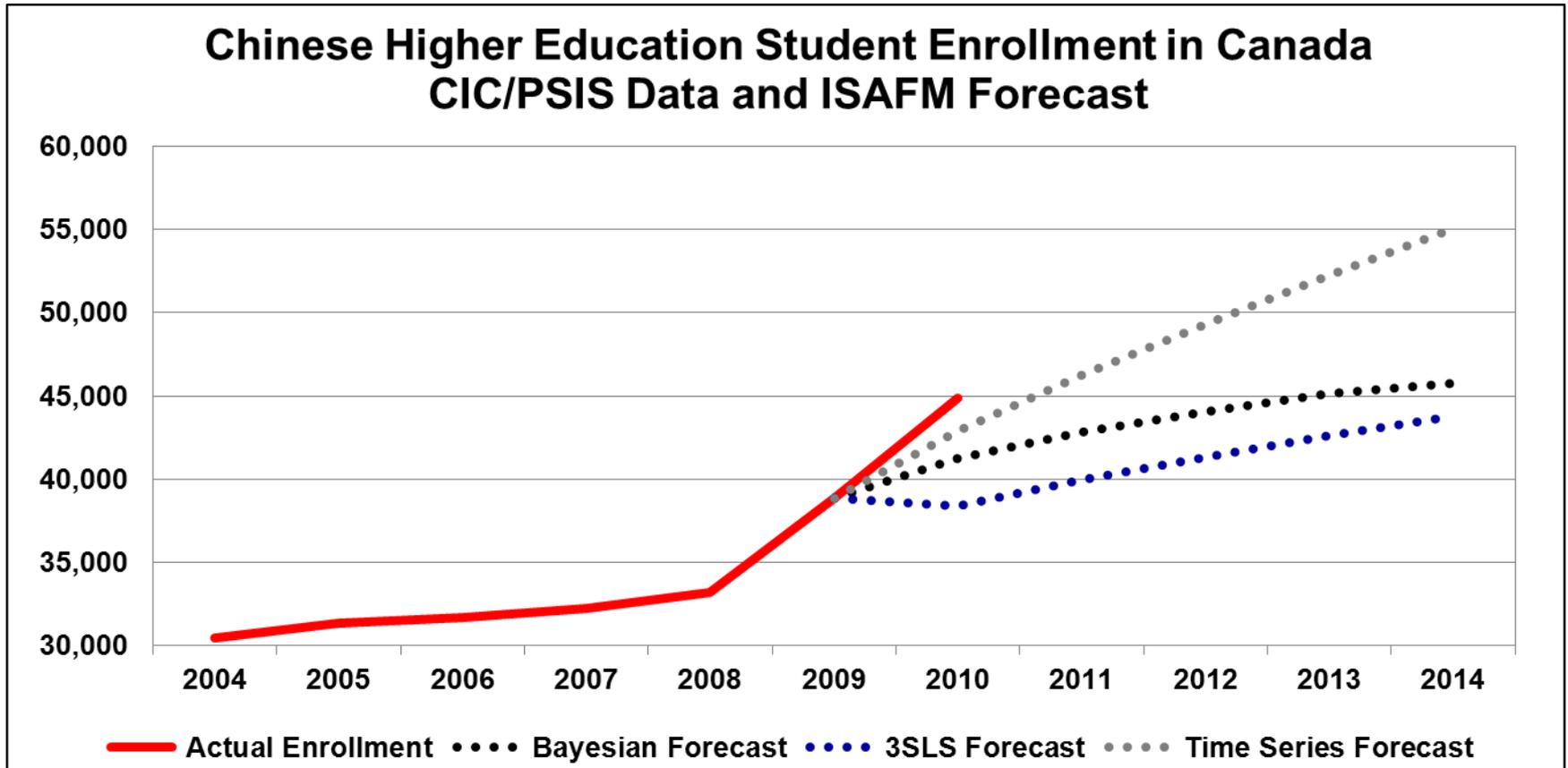
**ISAFM V1.1 forecast was highly accurate**

Notes: Actual enrollment data are based on both CIC total enrollments ("University" and "Other Post-Secondary" segments) and PSIS enrollment shares.

Sources: CIC, PSIS, ISAFM.

# ISAFM FORECAST (VERSION 2): CANADA

## Chinese Higher Education Student Enrollment



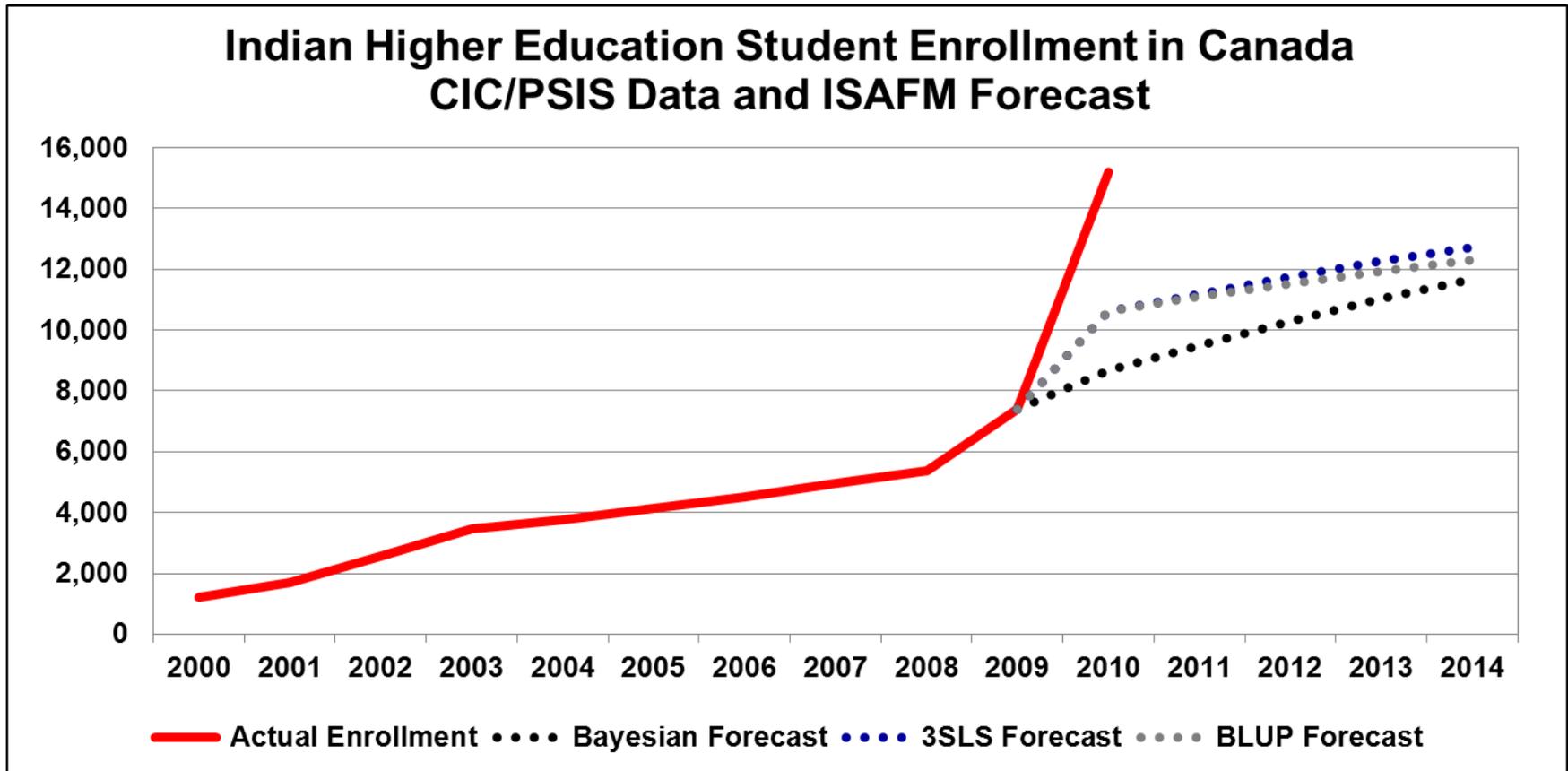
**ISAFM V1.1 TSF forecast was accurate – strong growth discount issue**

Notes: Actual enrollment data are based on both CIC total enrollments ("University" and "Other Post-Secondary" segments) and PSIS enrollment shares.

Sources: CIC, PSIS, ISAFM.

# ISAFM FORECAST (VERSION 2): CANADA

## Indian Higher Education Student Enrollment



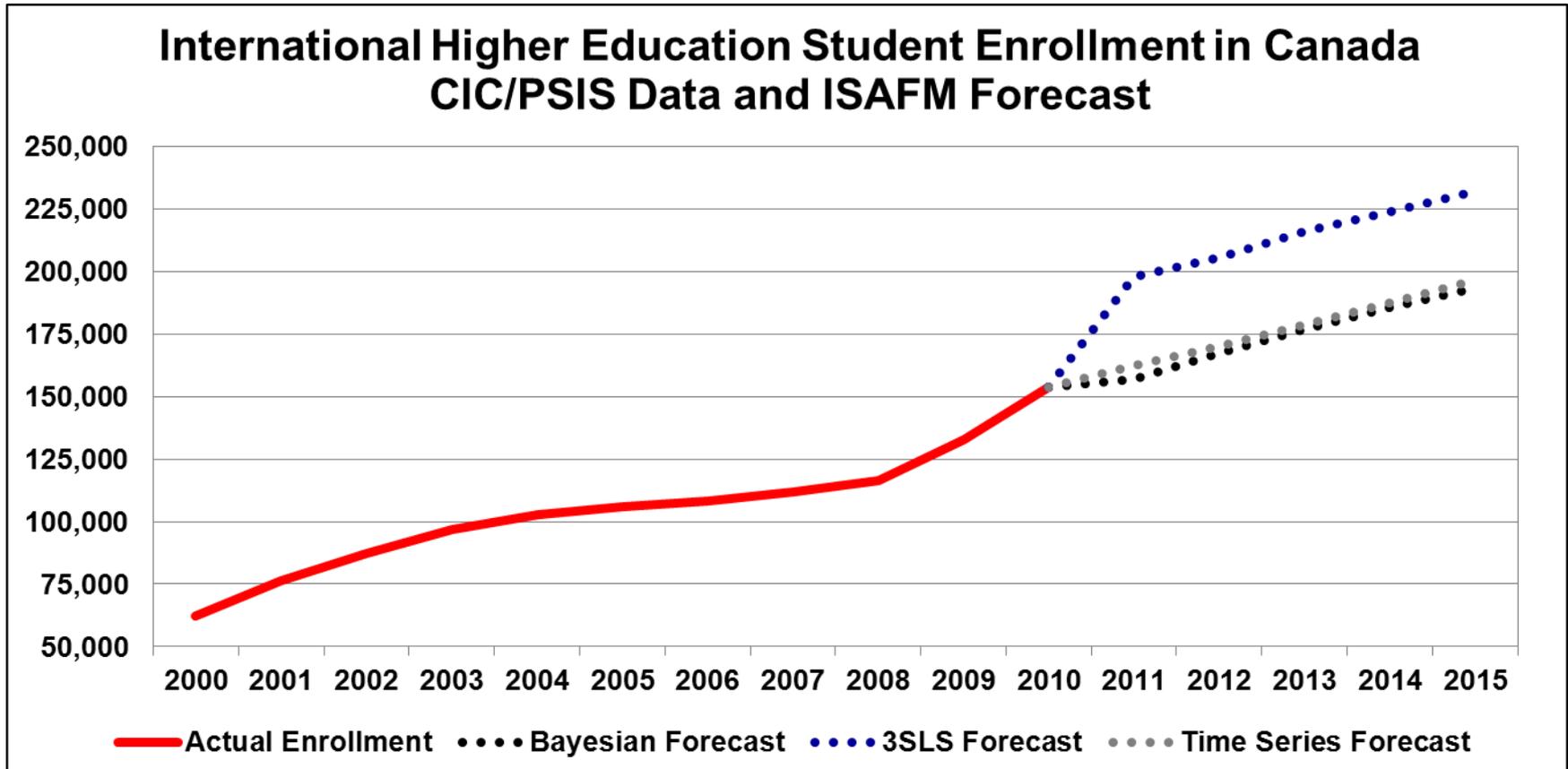
**ISAFM V1.1 forecast was purposefully geared to normative long-term approach**

Notes: Actual enrollment data are based on both CIC total enrollments ("University" and "Other Post-Secondary" segments) and PSIS enrollment shares.

Sources: CIC, PSIS, ISAFM.

# ISAFM FORECAST (VERSION 2): CANADA

## Total International Higher Education Student Enrollment



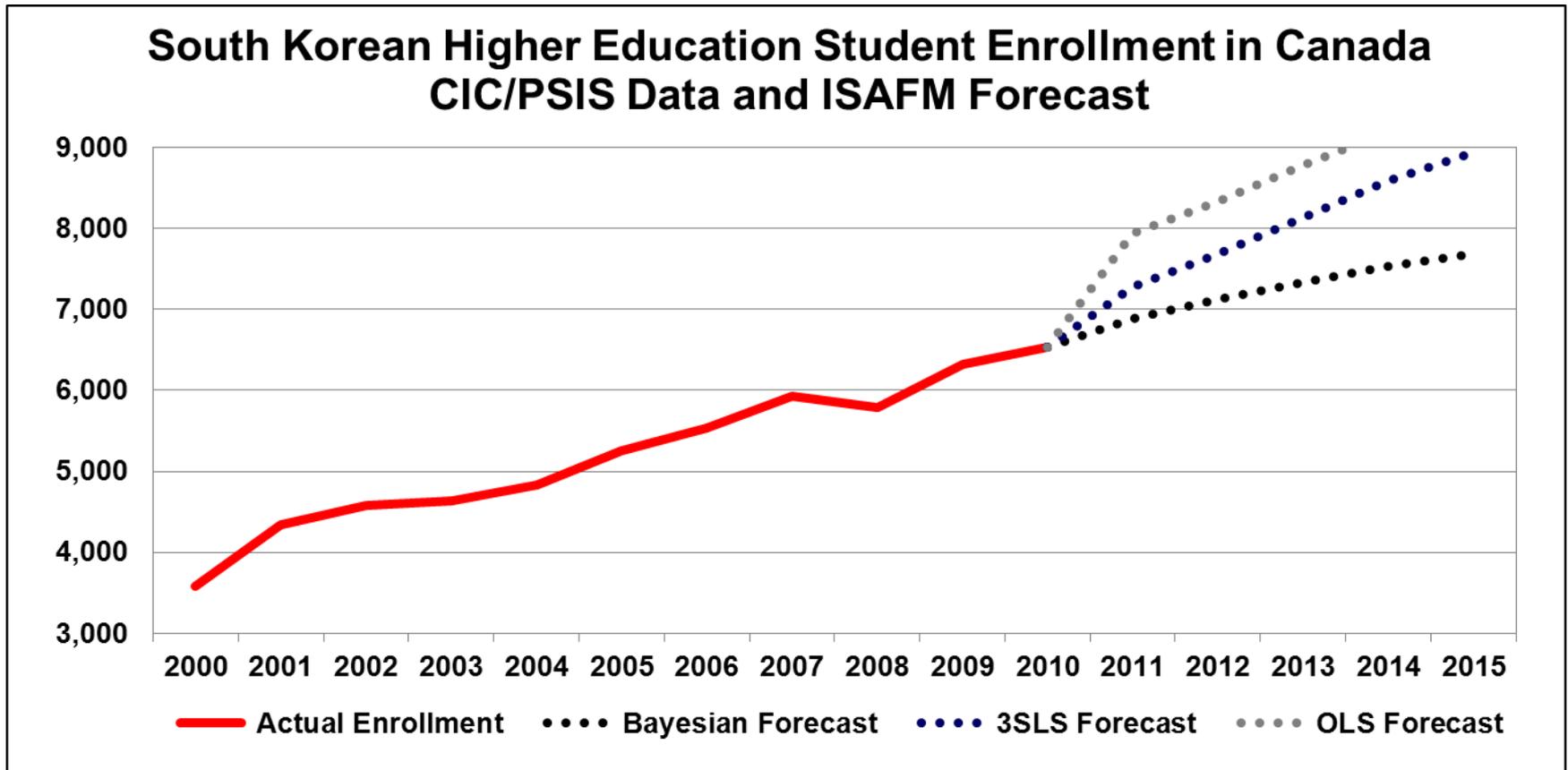
**ISAFM V1.1-2 forecast 3SLS appears best model**

Notes: Actual enrollment data are based on both CIC total enrollments ("University" and "Other Post-Secondary" segments) and PSIS enrollment shares.

Sources: CIC, PSIS, ISAFM.

# ISAFM FORECAST (VERSION 2): CANADA

## South Korean Higher Education Student Enrollment



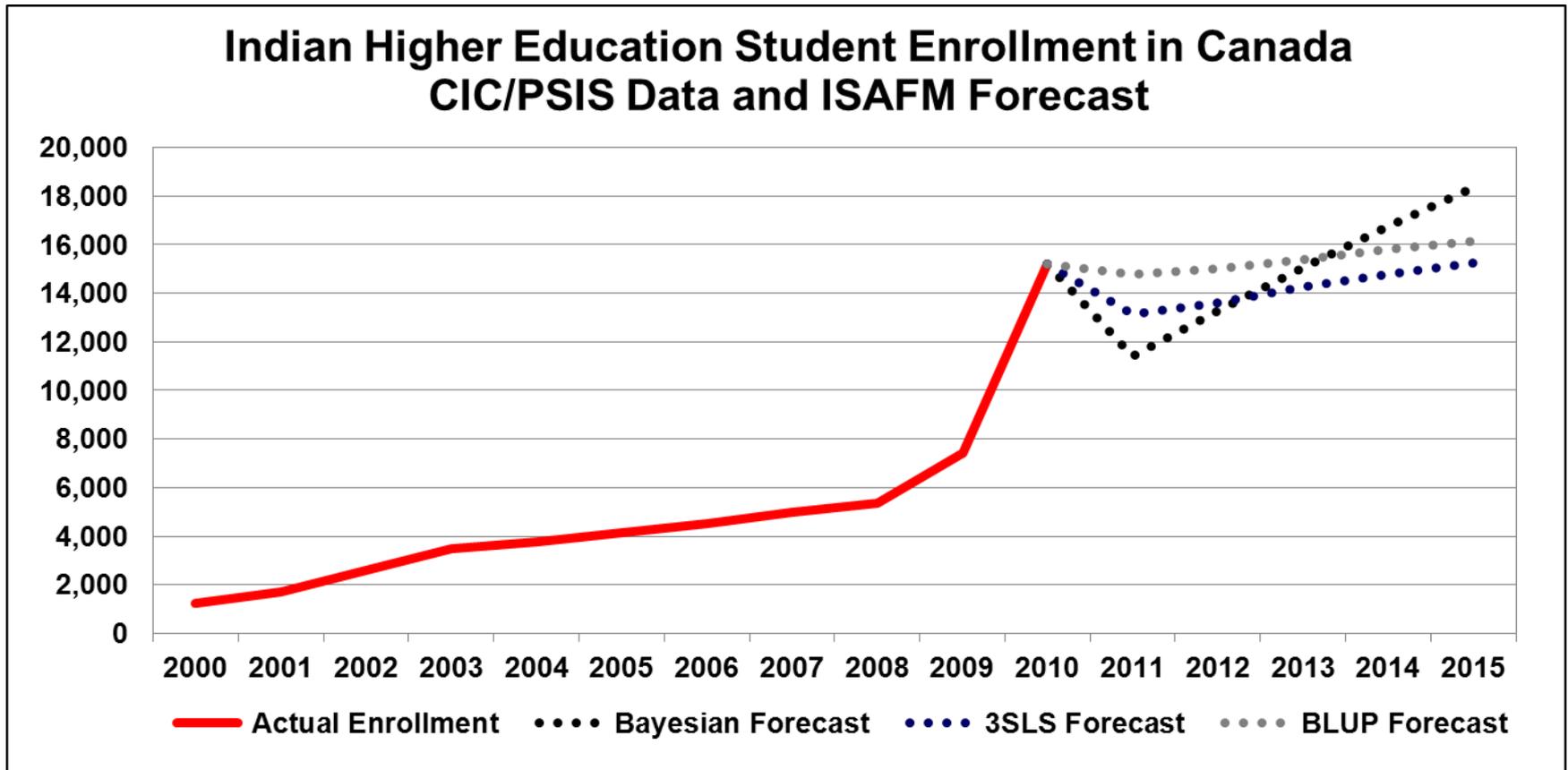
**ISAFM V1.1-2 forecasts steady growth**

Notes: Actual enrollment data are based on both CIC total enrollments ("University" and "Other Post-Secondary" segments) and PSIS enrollment shares.

Sources: CIC, PSIS, ISAFM.

# ISAFM FORECAST (VERSION 2): CANADA

## Indian Higher Education Student Enrollment



**ISAFM V1.1-2 corrects for hyper growth**

Notes: Actual enrollment data are based on both CIC total enrollments ("University" and "Other Post-Secondary" segments) and PSIS enrollment shares.

Sources: CIC, PSIS, ISAFM.

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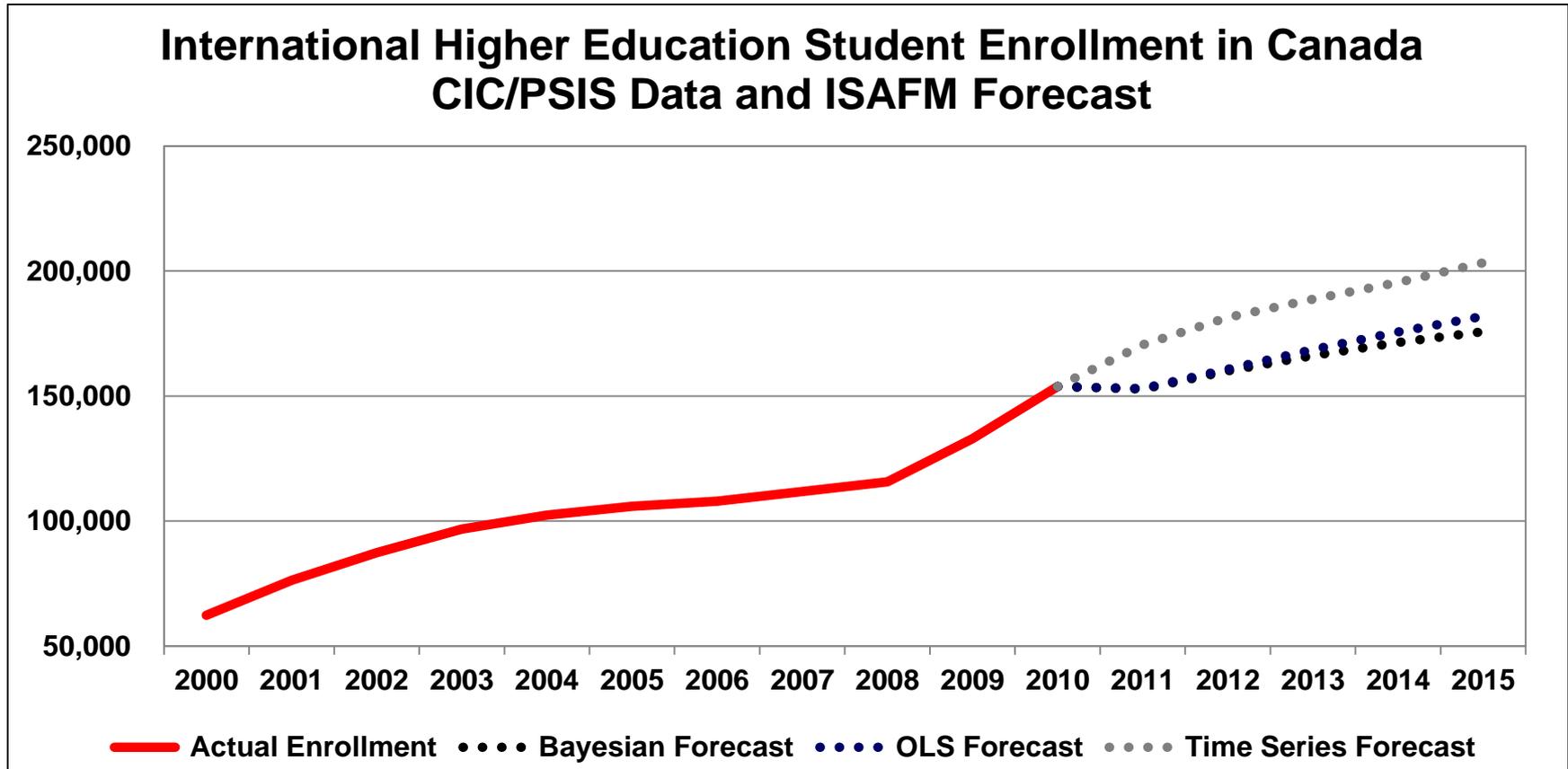
**ISAFM Forecast (v1.1-2)**

**ISAFM Forecast (v1.1-3)**

**Discussion**

# ISAFM FORECAST (VERSION 3): CANADA

## Total International Higher Education Student Enrollment



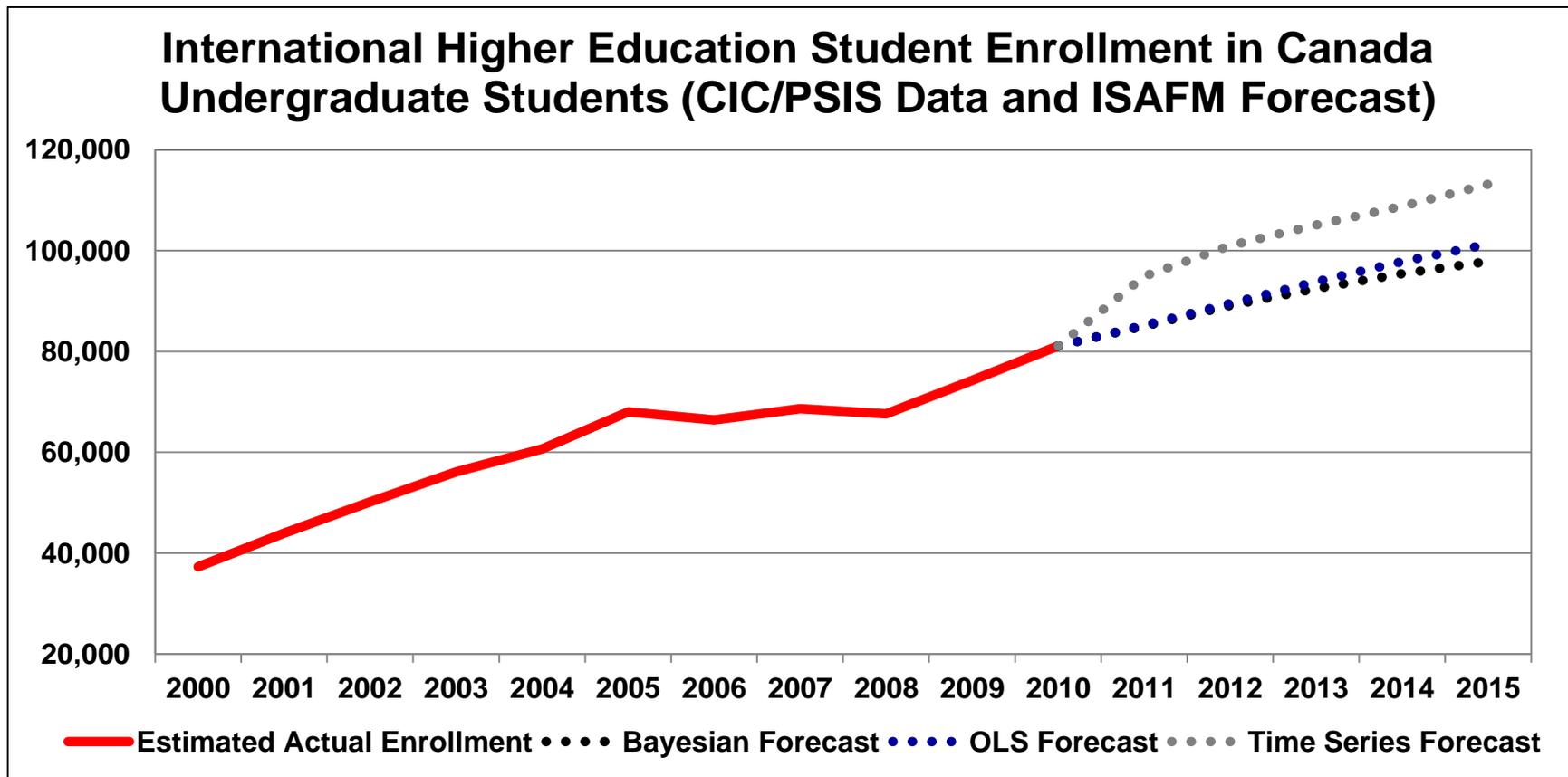
**Steady growth, slight slow down**

Notes: Actual enrollment data are based on both CIC total enrollments ("University" and "Other Post-Secondary" segments) and PSIS enrollment shares.

Sources: CIC, PSIS, ISAFM.

# ISAFM FORECAST (VERSION 3): CANADA

## International Undergraduate Higher Education Student Enrollment



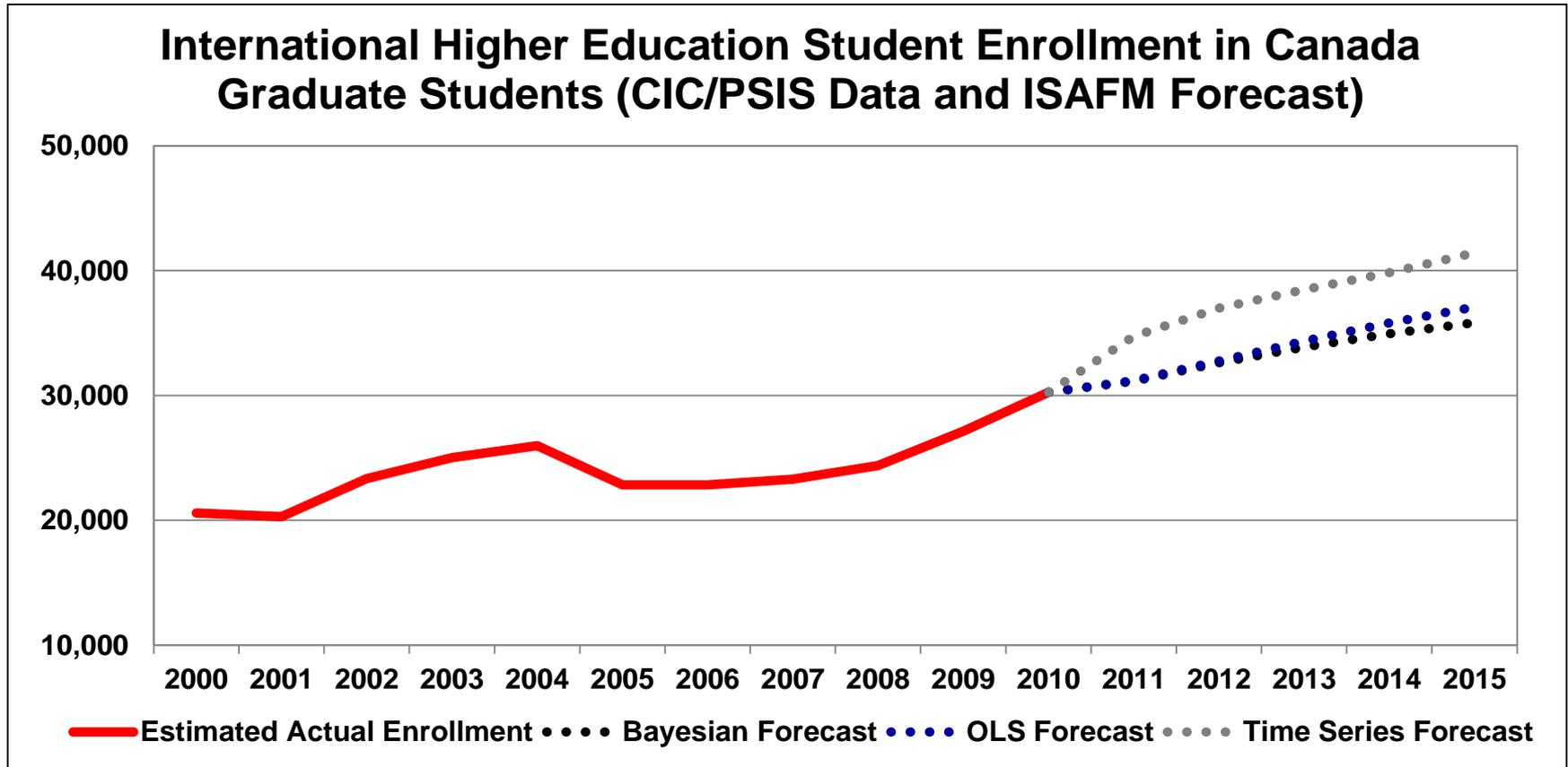
**Continued strong growth**

Notes: Actual enrollment data are based on both CIC total enrollments ("University" and "Other Post-Secondary" segments) and PSIS enrollment shares.

Sources: CIC, PSIS, ISAFM.

# ISAFM FORECAST (VERSION 3): CANADA

## International Graduate Higher Education Student Enrollment



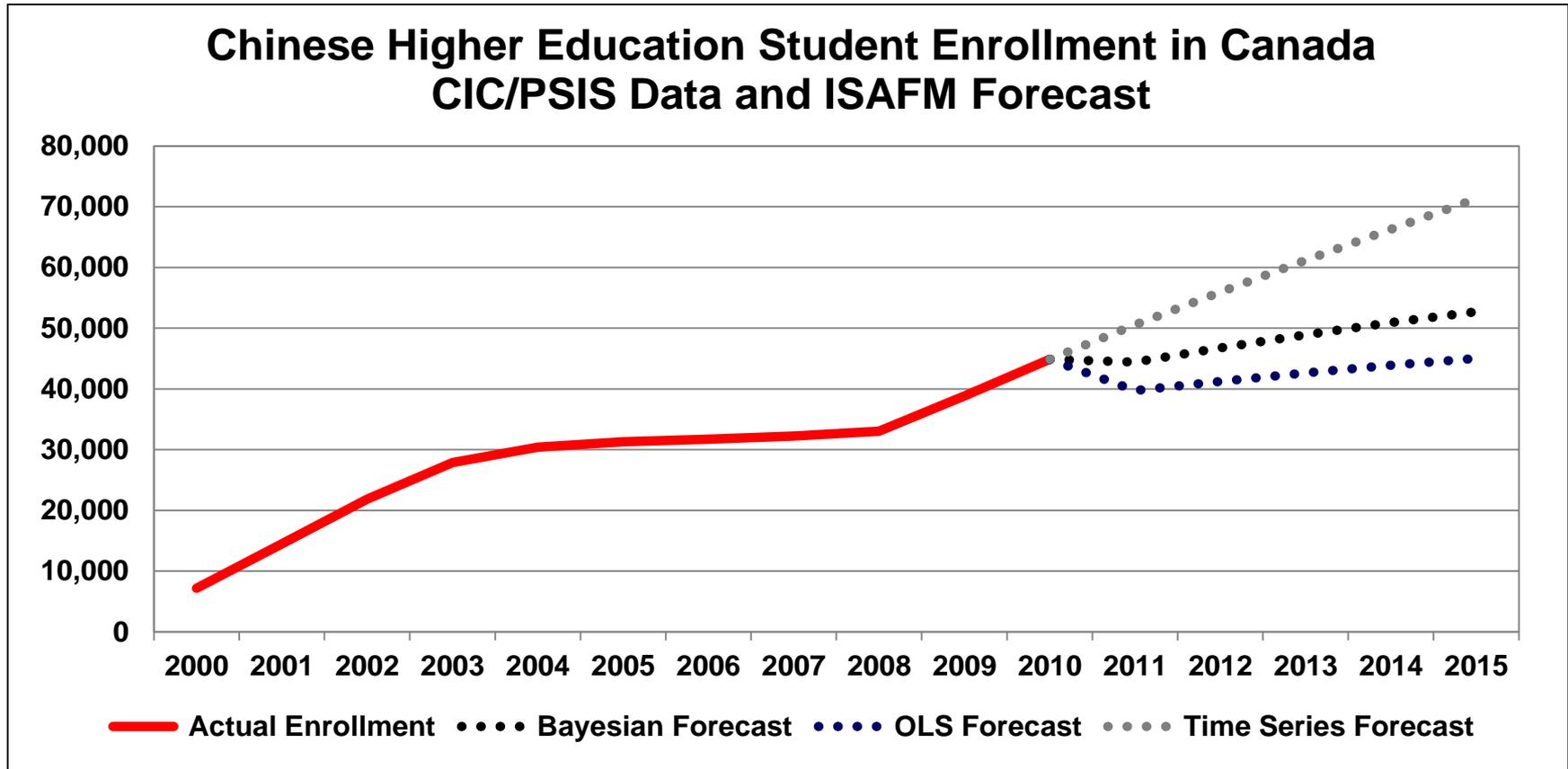
**Slower growth than at the undergraduate level**

Notes: Actual enrollment data are based on both CIC total enrollments ("University" and "Other Post-Secondary" segments) and PSIS enrollment shares.

Sources: CIC, PSIS, ISAFM.

# ISAFM FORECAST (VERSION 3): CANADA

## Chinese Higher Education Student Enrollment



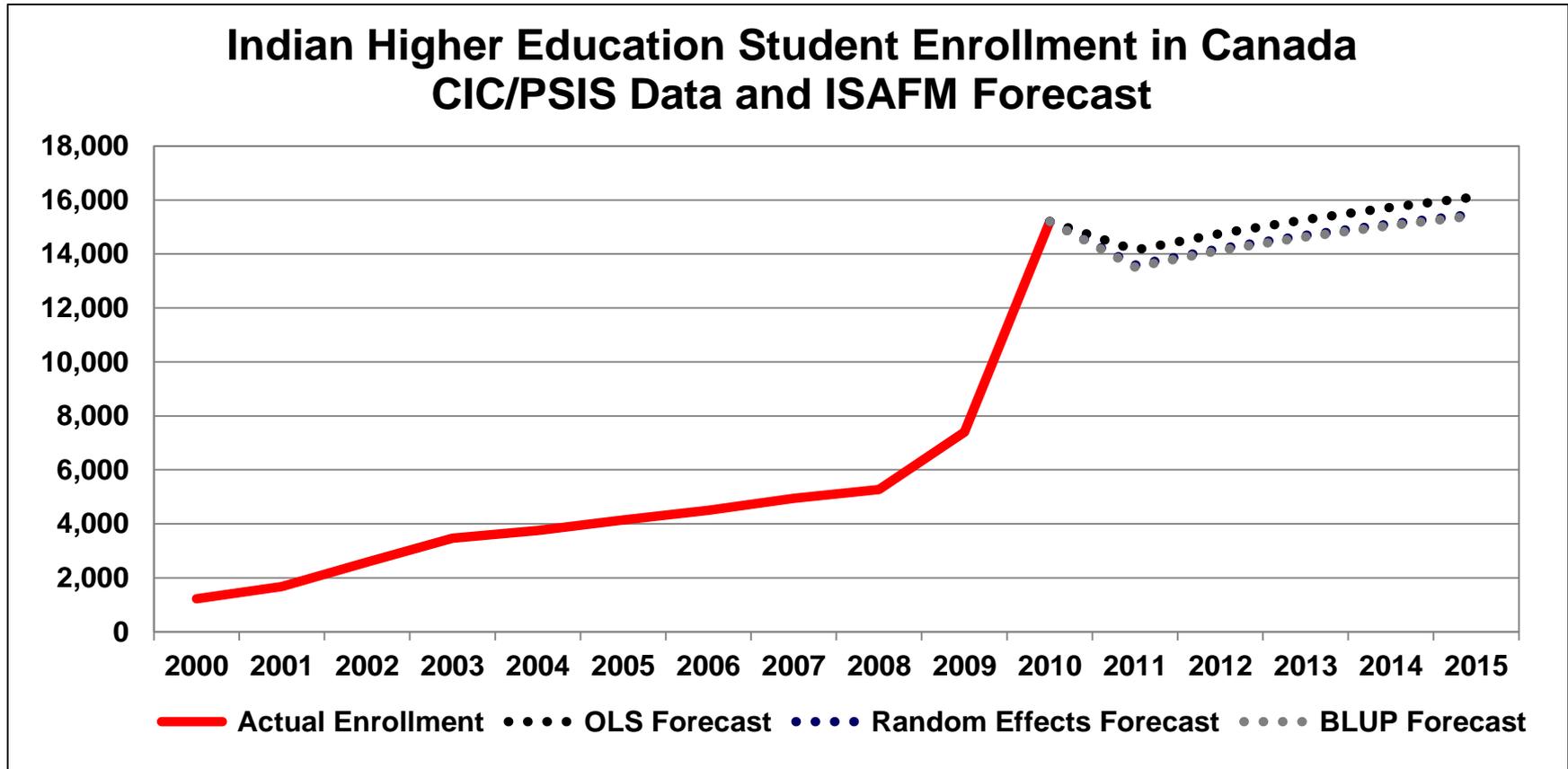
**Strong growth is a distinct possibility**

Notes: Actual enrollment data are based on both CIC total enrollments ("University" and "Other Post-Secondary" segments) and PSIS enrollment shares.

Sources: CIC, PSIS, ISAFM.

# ISAFM FORECAST (VERSION 3): CANADA

## Indian Higher Education Student Enrollment



### The 2011 “dip”: Forecast and reality...

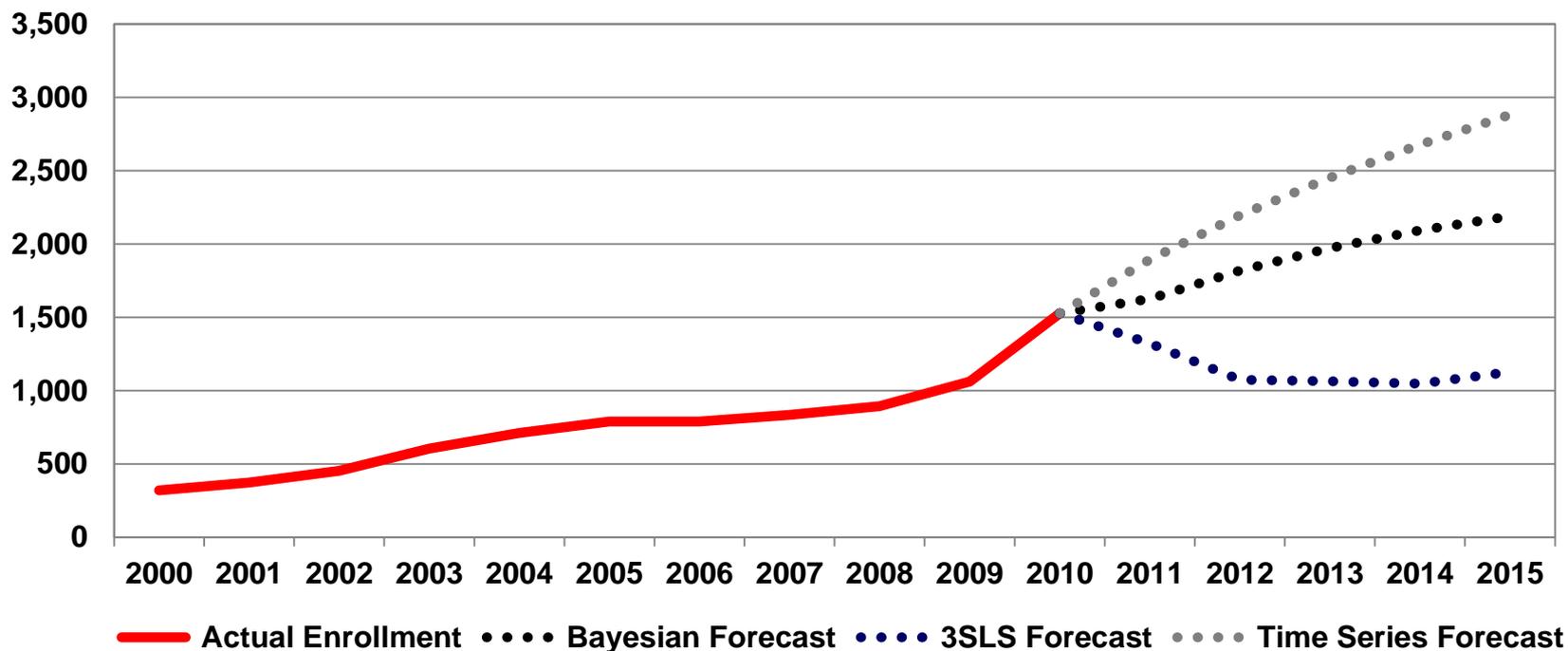
Notes: Actual enrollment data are based on both CIC total enrollments ("University" and "Other Post-Secondary" segments) and PSIS enrollment shares.

Sources: CIC, PSIS, ISAFM.

# ISAFM FORECAST (VERSION 3): CANADA

## Vietnamese Higher Education Student Enrollment

### Vietnamese Higher Education Student Enrollment in Canada CIC/PSIS Data and ISAFM Forecast



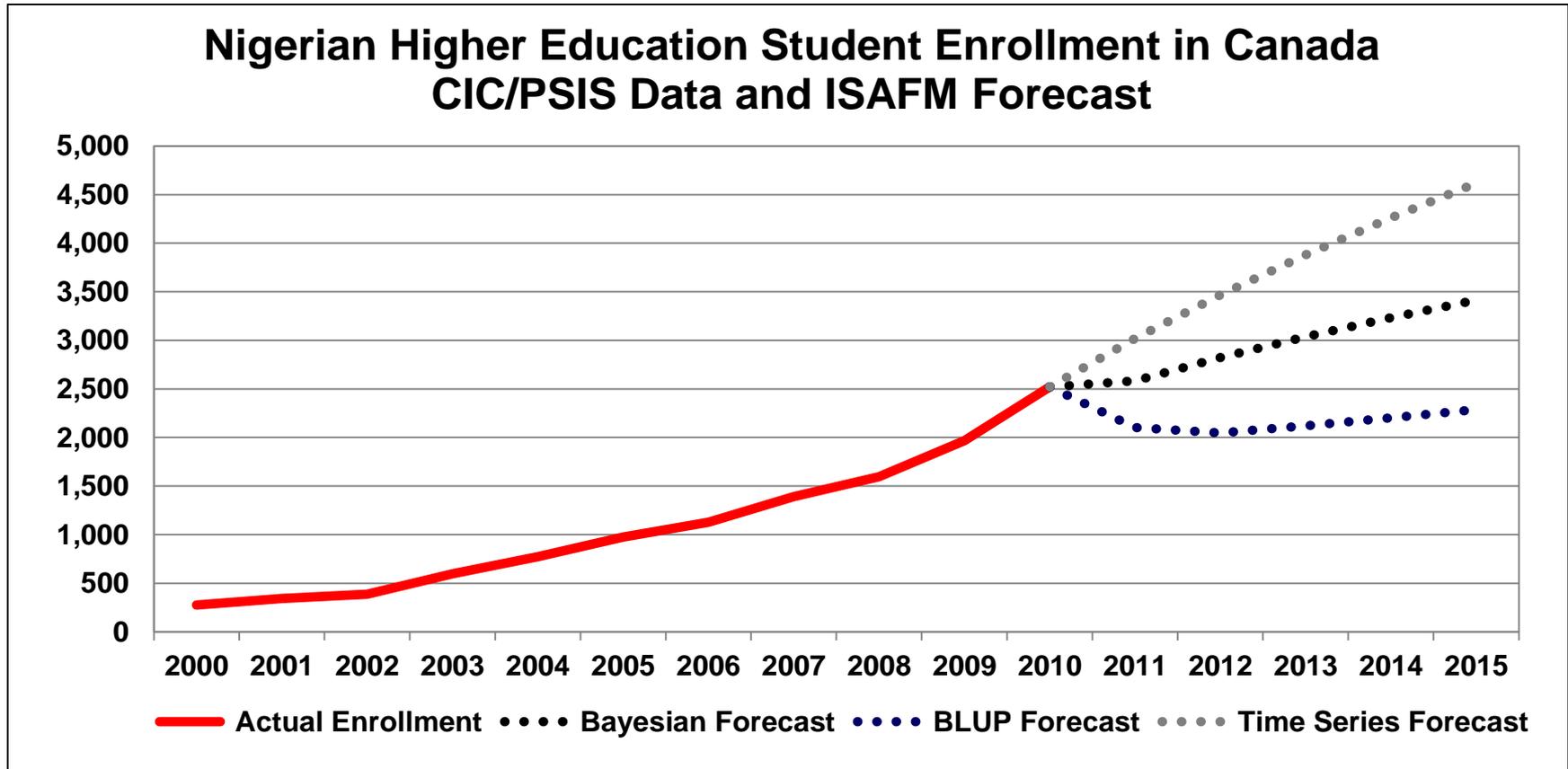
**Continued growth**

Notes: Actual enrollment data are based on both CIC total enrollments ("University" and "Other Post-Secondary" segments) and PSIS enrollment shares.

Sources: CIC, PSIS, ISAFM.

# ISAFM FORECAST (VERSION 3): CANADA

## Nigerian Higher Education Student Enrollment



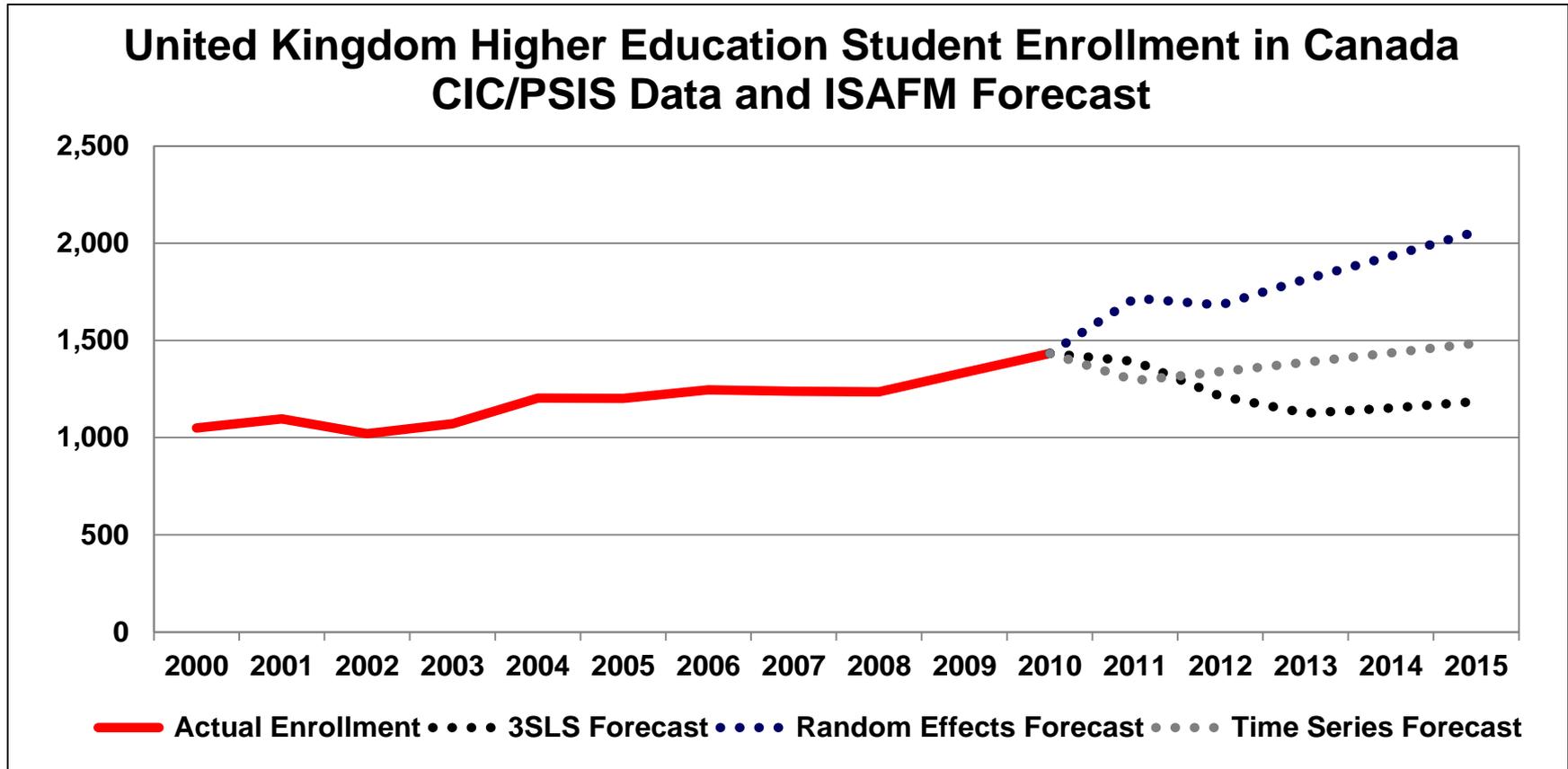
**Continued, sustained growth**

Notes: Actual enrollment data are based on both CIC total enrollments ("University" and "Other Post-Secondary" segments) and PSIS enrollment shares.

Sources: CIC, PSIS, ISAFM.

# ISAFM FORECAST (VERSION 3): CANADA

## United Kingdom Higher Education Student Enrollment



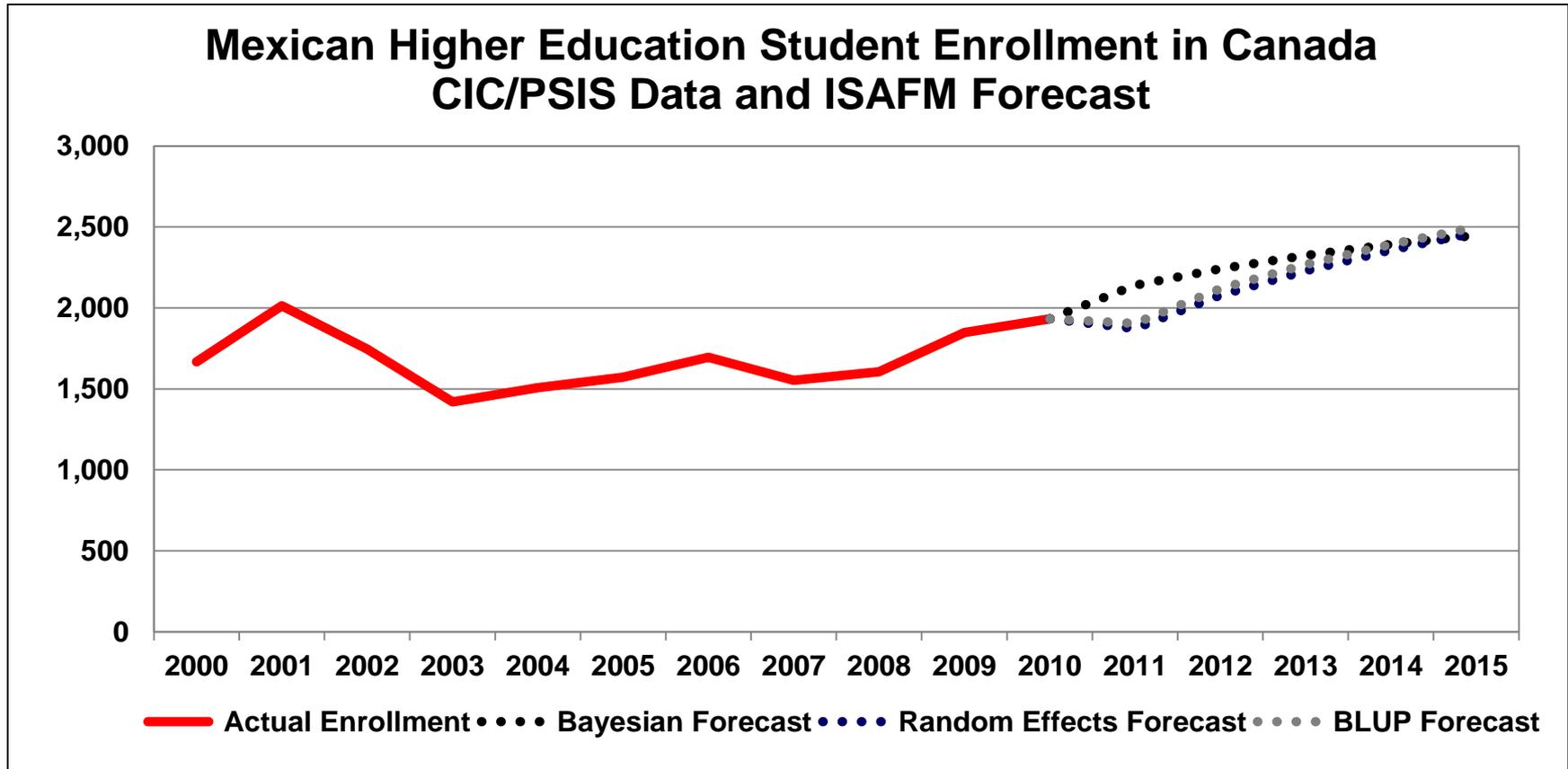
**The UK is an open question**

Notes: Actual enrollment data are based on both CIC total enrollments ("University" and "Other Post-Secondary" segments) and PSIS enrollment shares.

Sources: CIC, PSIS, ISAFM.

# ISAFM FORECAST (VERSION 3): CANADA

## Mexican Higher Education Student Enrollment



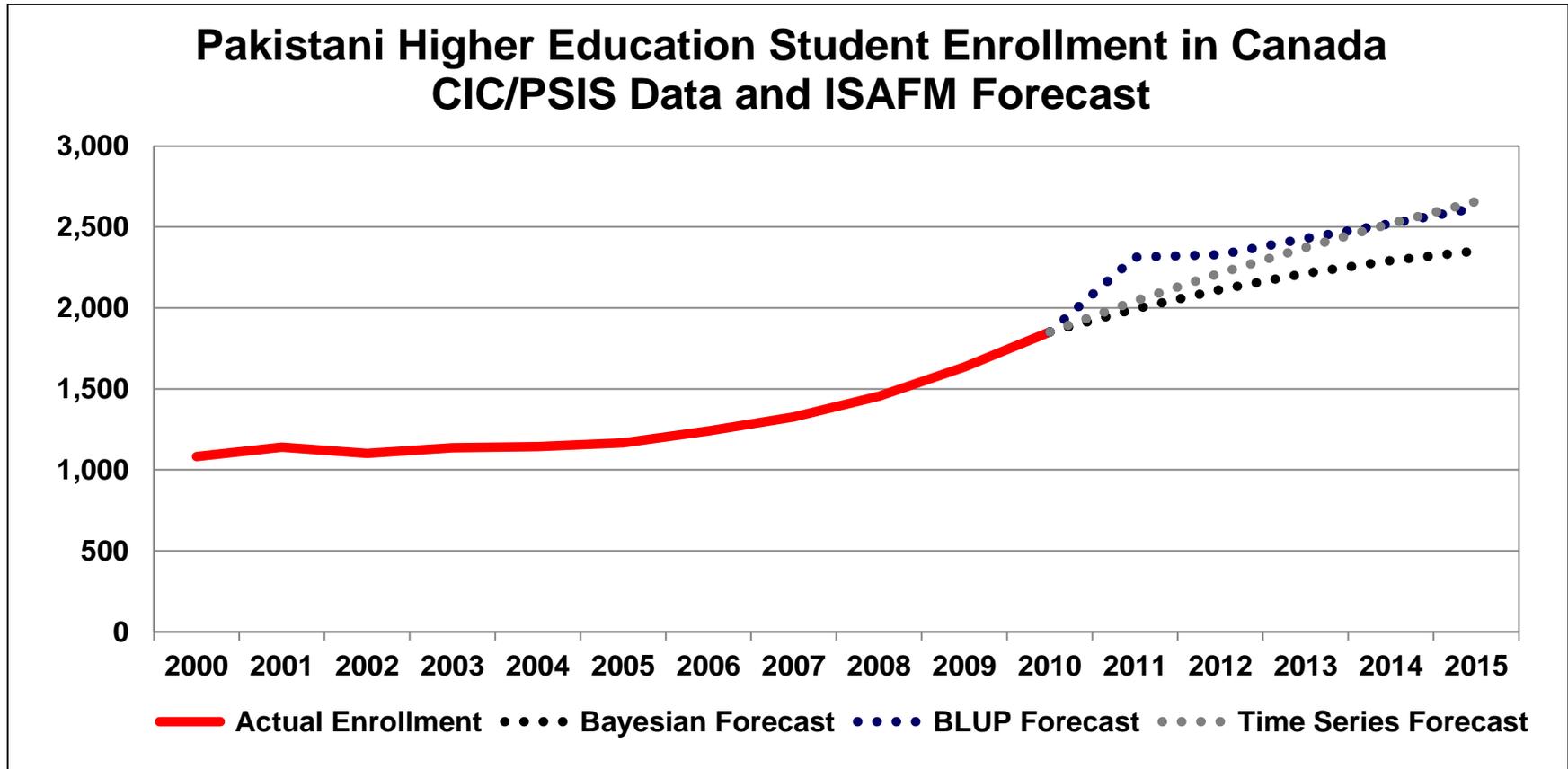
**Low growth numbers**

Notes: Actual enrollment data are based on both CIC total enrollments ("University" and "Other Post-Secondary" segments) and PSIS enrollment shares.

Sources: CIC, PSIS, ISAFM.

# ISAFM FORECAST (VERSION 3): CANADA

## Pakistani Higher Education Student Enrollment



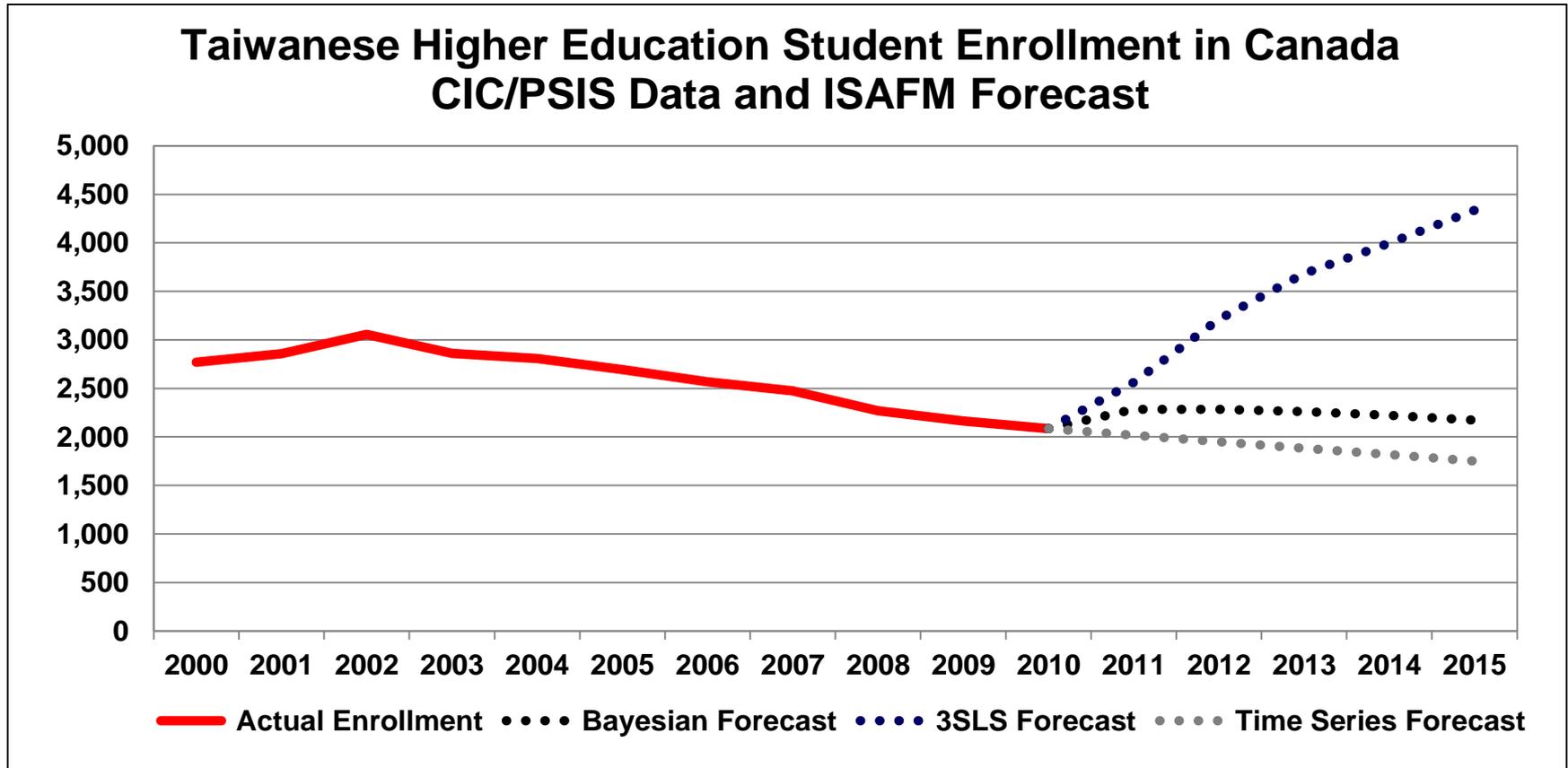
**Steady but slow growth**

Notes: Actual enrollment data are based on both CIC total enrollments ("University" and "Other Post-Secondary" segments) and PSIS enrollment shares.

Sources: CIC, PSIS, ISAFM.

# ISAFM FORECAST (VERSION 3): CANADA

## Taiwanese Higher Education Student Enrollment



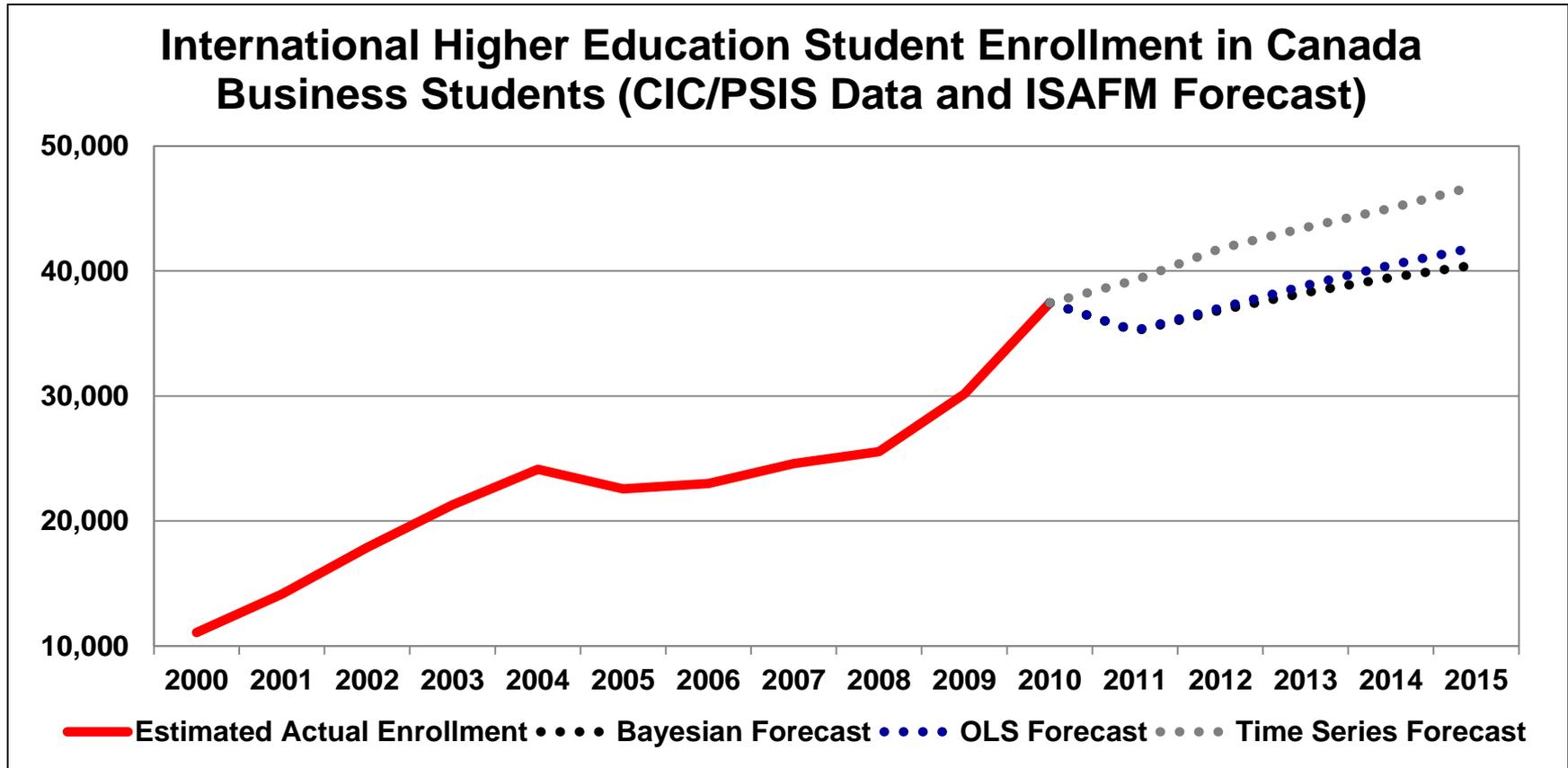
**Likely continued enrollment slide**

Notes: Actual enrollment data are based on both CIC total enrollments ("University" and "Other Post-Secondary" segments) and PSIS enrollment shares.

Sources: CIC, PSIS, ISAFM.

# ISAFM FORECAST (VERSION 3): CANADA

## International Higher Education Student Enrollment - Business



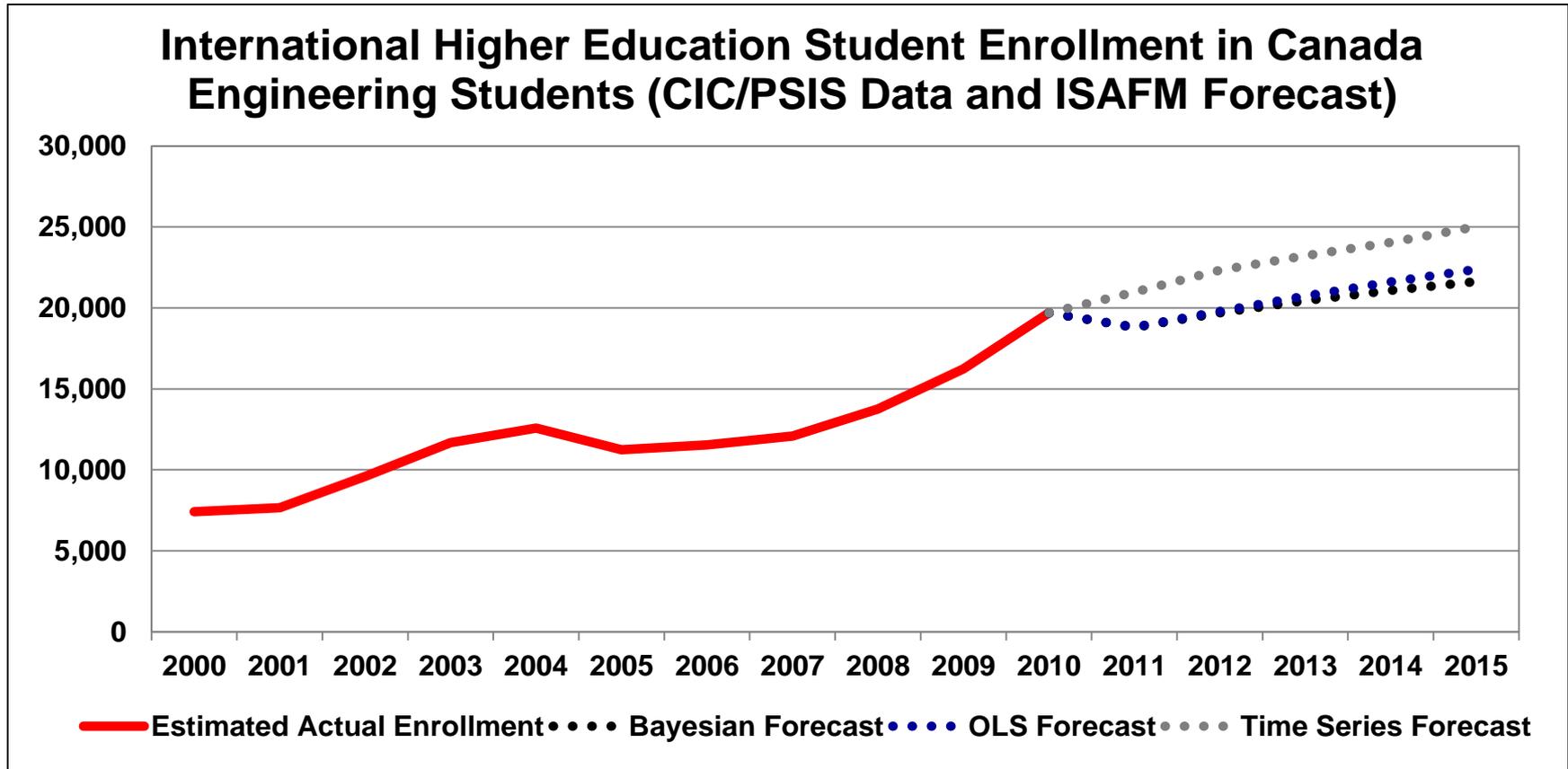
**Long-term growth**

Notes: Actual enrollment data are based on both CIC total enrollments ("University" and "Other Post-Secondary" segments) and PSIS enrollment shares.

Sources: CIC, PSIS, ISAFM.

# ISAFM FORECAST (VERSION 3): CANADA

## International Higher Education Student Enrollment - Engineering



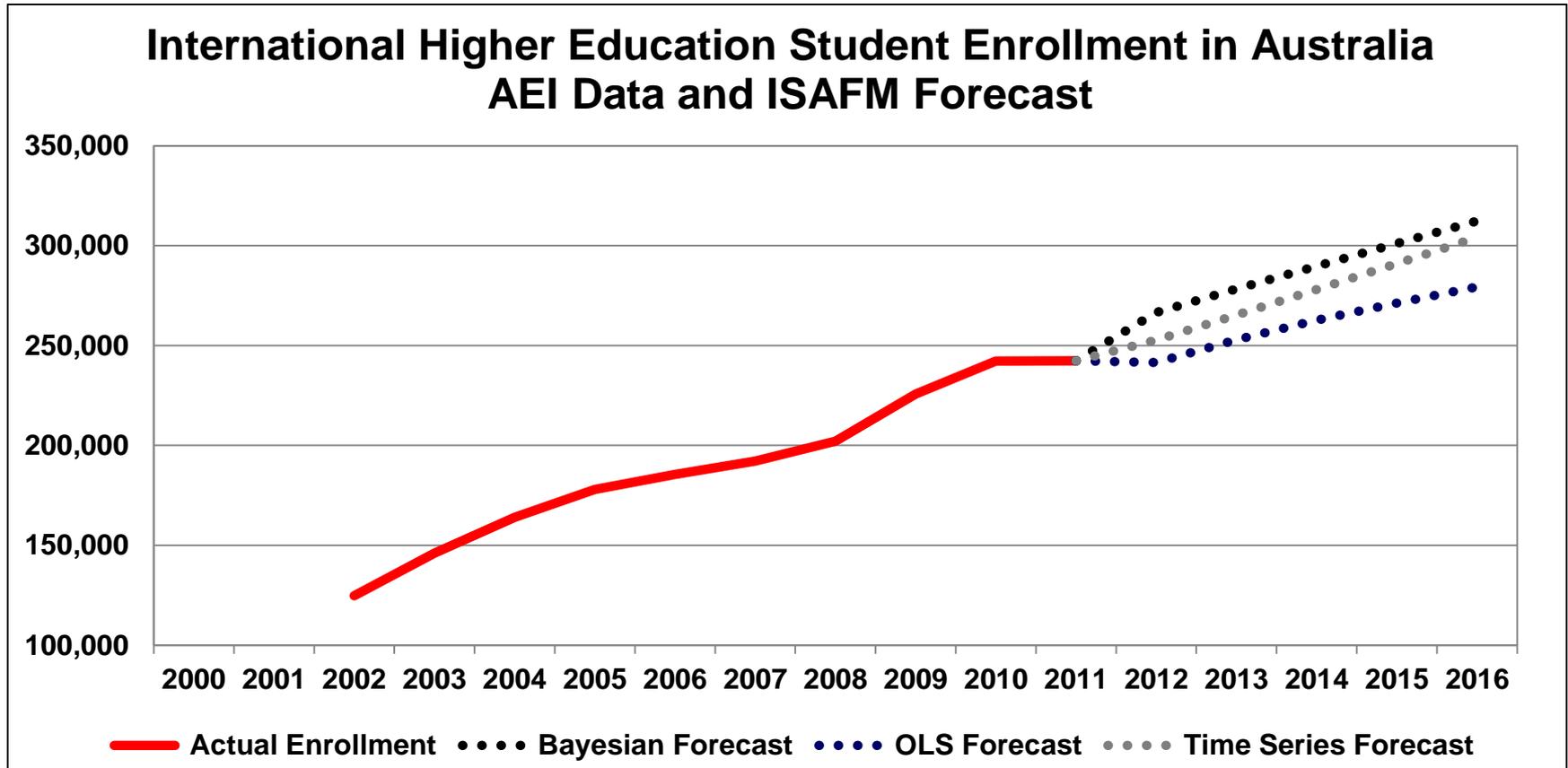
**Slow down of growth**

Notes: Actual enrollment data are based on both CIC total enrollments ("University" and "Other Post-Secondary" segments) and PSIS enrollment shares.

Sources: CIC, PSIS, ISAFM.

# ISAFM FORECAST (VERSION 3): AUSTRALIA

## Total International Higher Education Student Enrollment

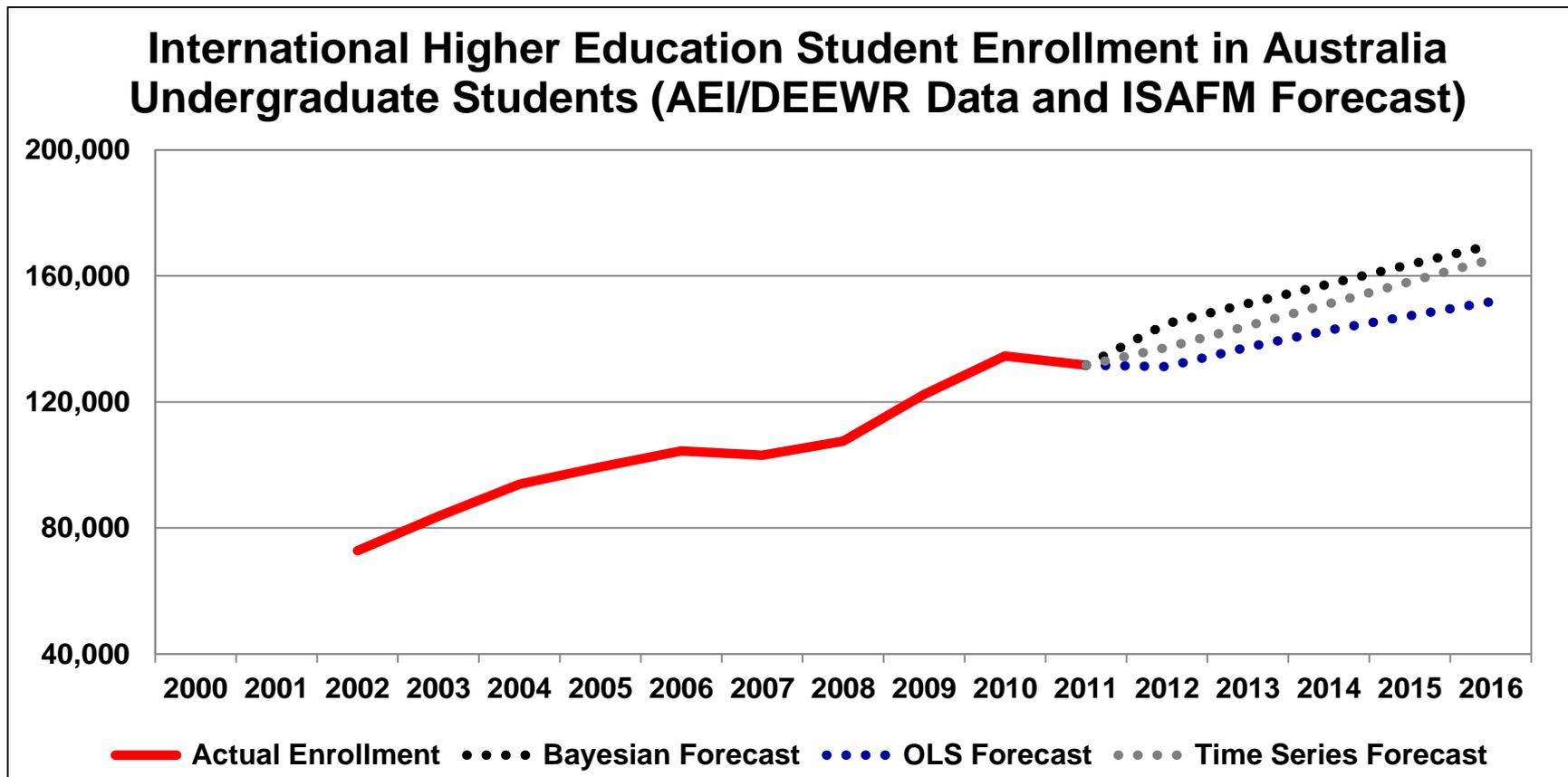


**2012 is flat at best, return to growth in 2013 (subject to ...)**

Notes: Actual enrollment data are based on both AEI total enrollments and DEEWR enrollment shares.  
Sources: AEI, DEEWR and ISAFM.

# ISAFM FORECAST (VERSION 3): AUSTRALIA

## International Undergraduate Higher Education Student Enrollment

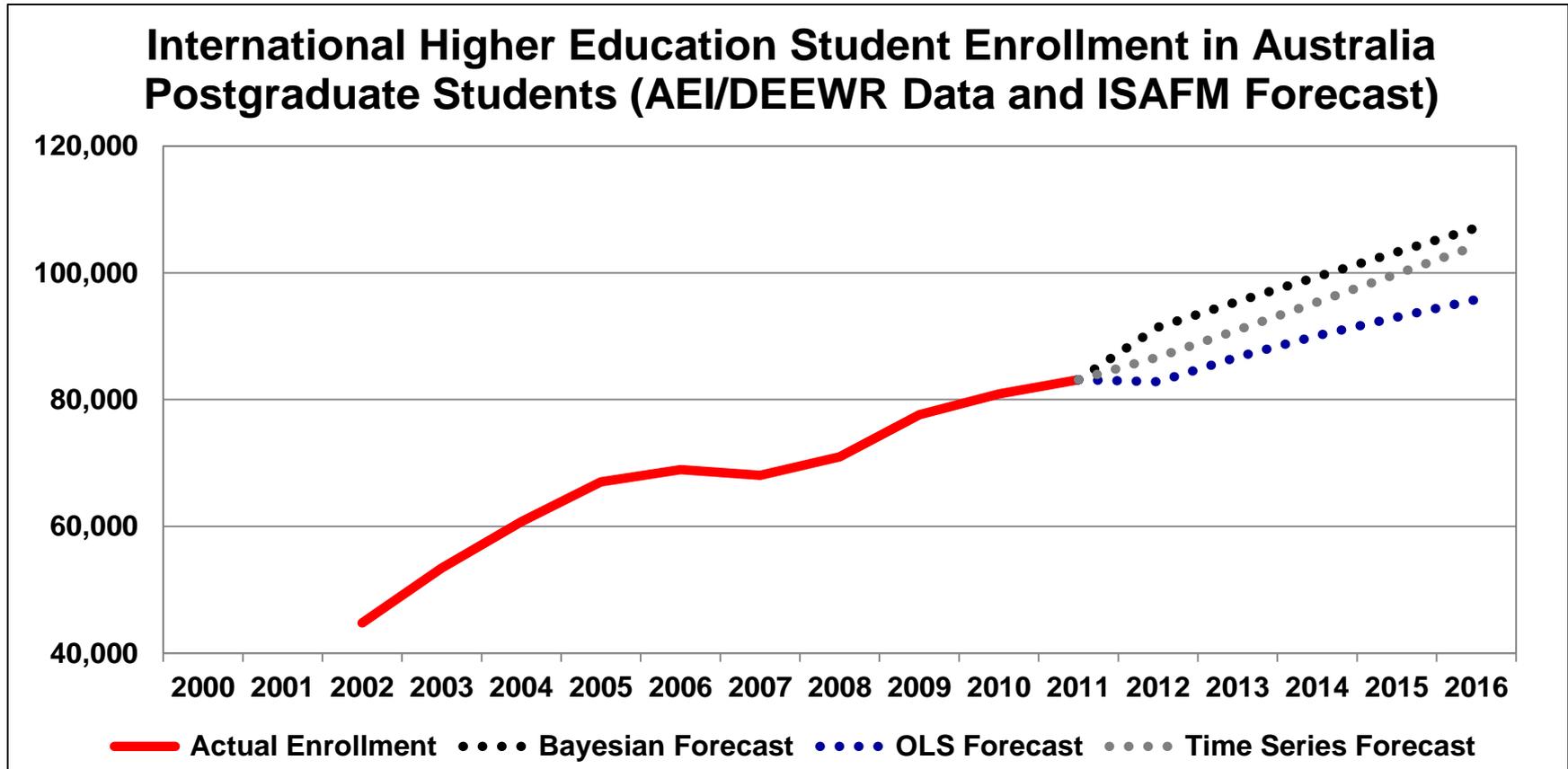


**Dip in 2012, then slow recovery**

Notes: Actual enrollment data are based on both AEI total enrollments and DEEWR enrollment shares.  
Sources: AEI, DEEWR and ISAFM.

# ISAFM FORECAST (VERSION 3): AUSTRALIA

## International Postgraduate Higher Education Student Enrollment

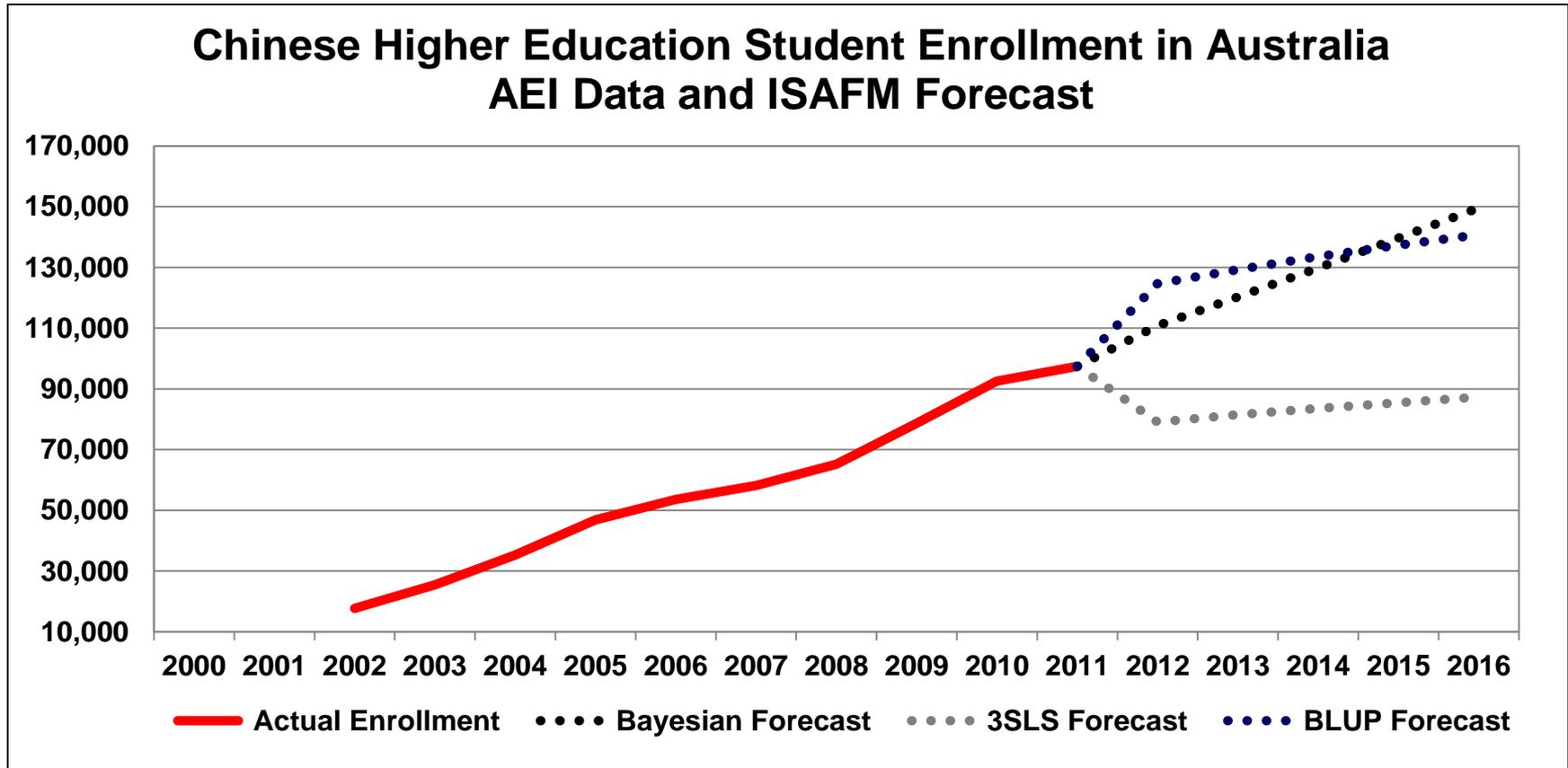


**Better growth prospects than the undergraduate sector**

Notes: Actual enrollment data are based on both AEI total enrollments and DEEWR enrollment shares.  
 Sources: AEI, DEEWR and ISAFM.

# ISAFM FORECAST (VERSION 3): AUSTRALIA

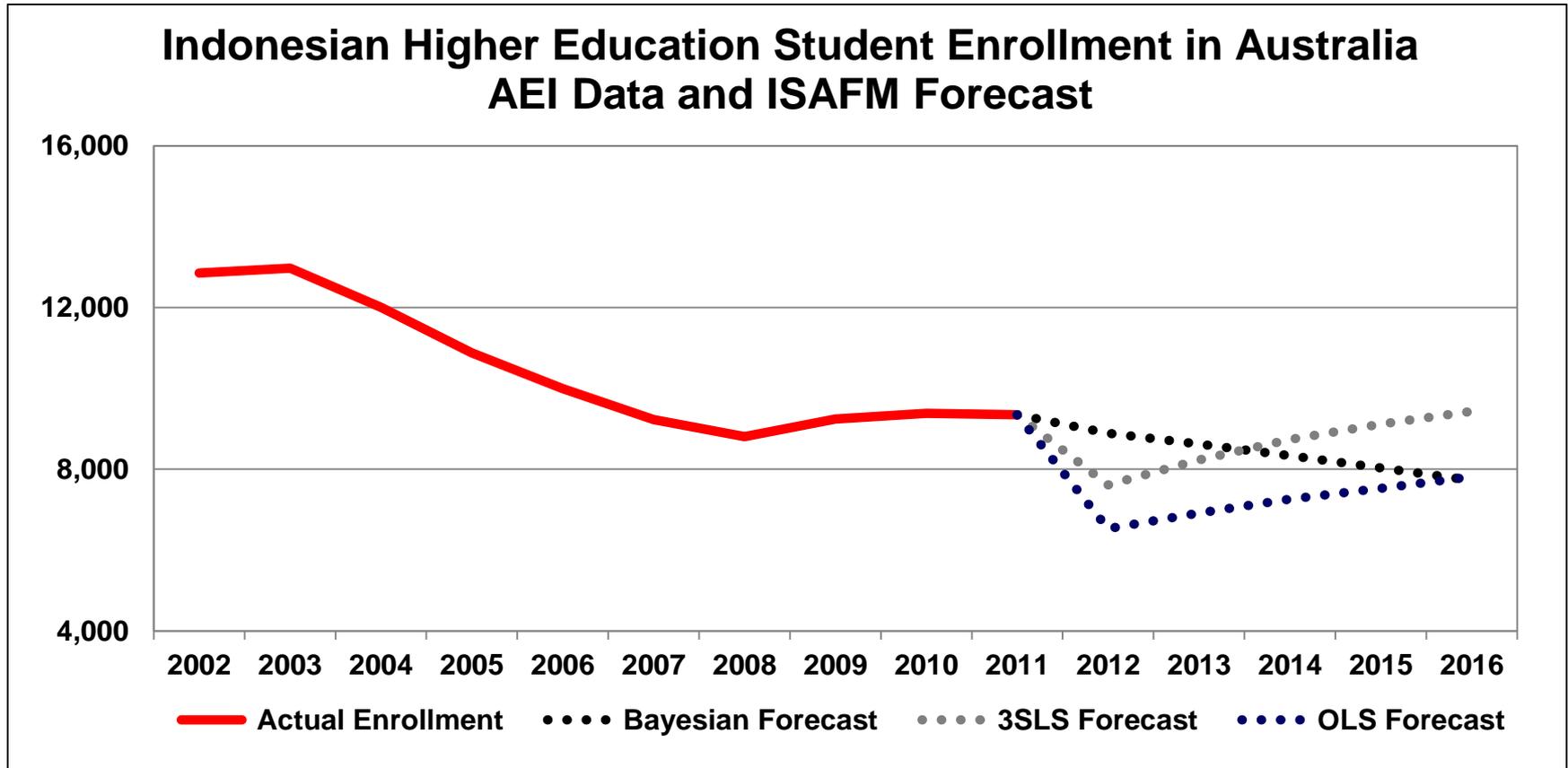
## Chinese Higher Education Student Enrollment



**Enrollment uncertainty relative to visa regulation and competition**

# ISAFM FORECAST (VERSION 3): AUSTRALIA

## Indonesian Higher Education Student Enrollment

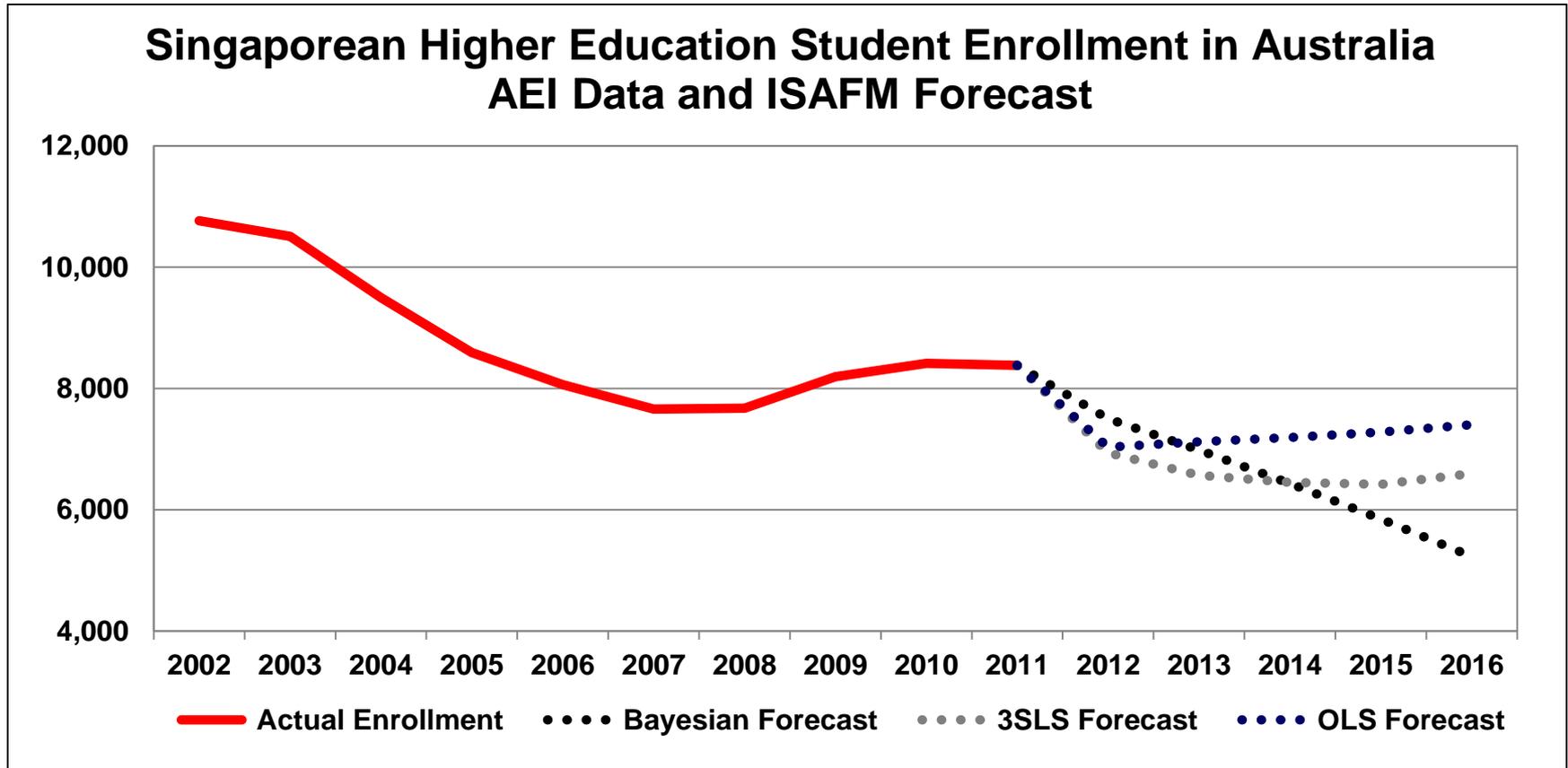


**Continued downward slope**

Sources: AEI, DEEWR and ISAFM.

# ISAFM FORECAST (VERSION 3): AUSTRALIA

## Singaporean Higher Education Student Enrollment

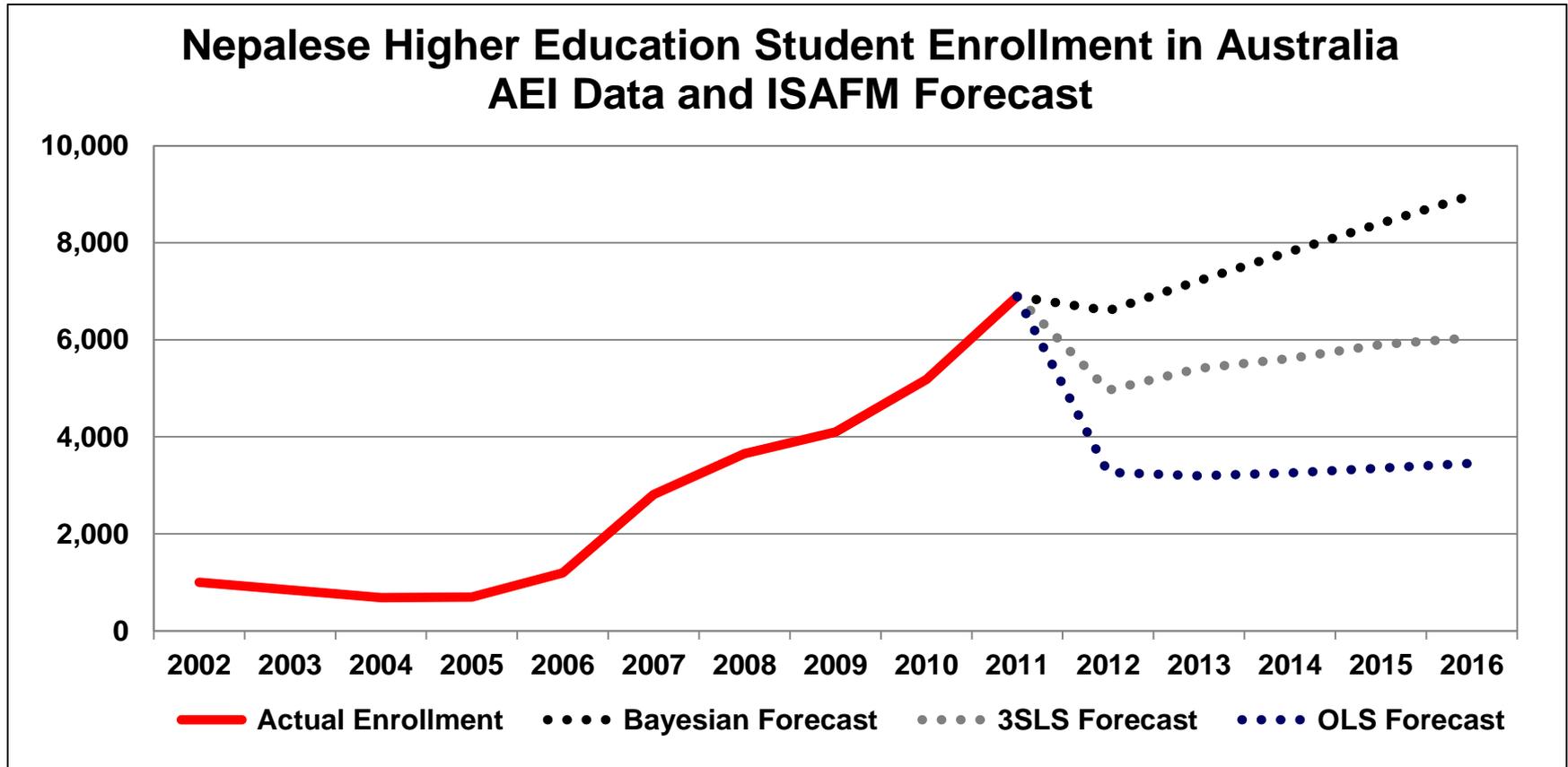


**Leveling out at lower level**

Sources: AEI, DEEWR and ISAFM.

# ISAFM FORECAST (VERSION 3): AUSTRALIA

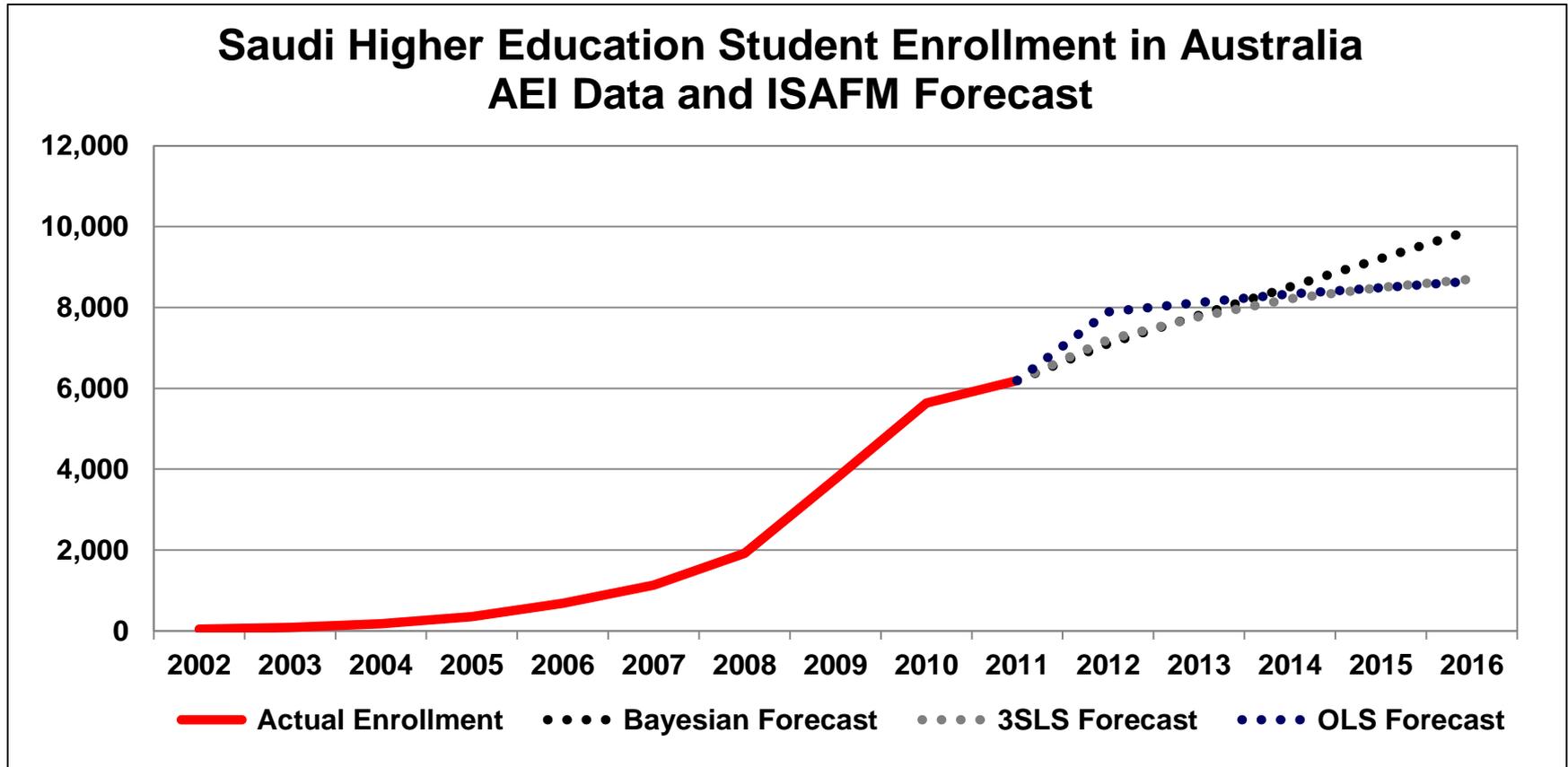
## Nepalese Higher Education Student Enrollment



Sources: AEI, DEEWR and ISAFM.

# ISAFM FORECAST (VERSION 3): AUSTRALIA

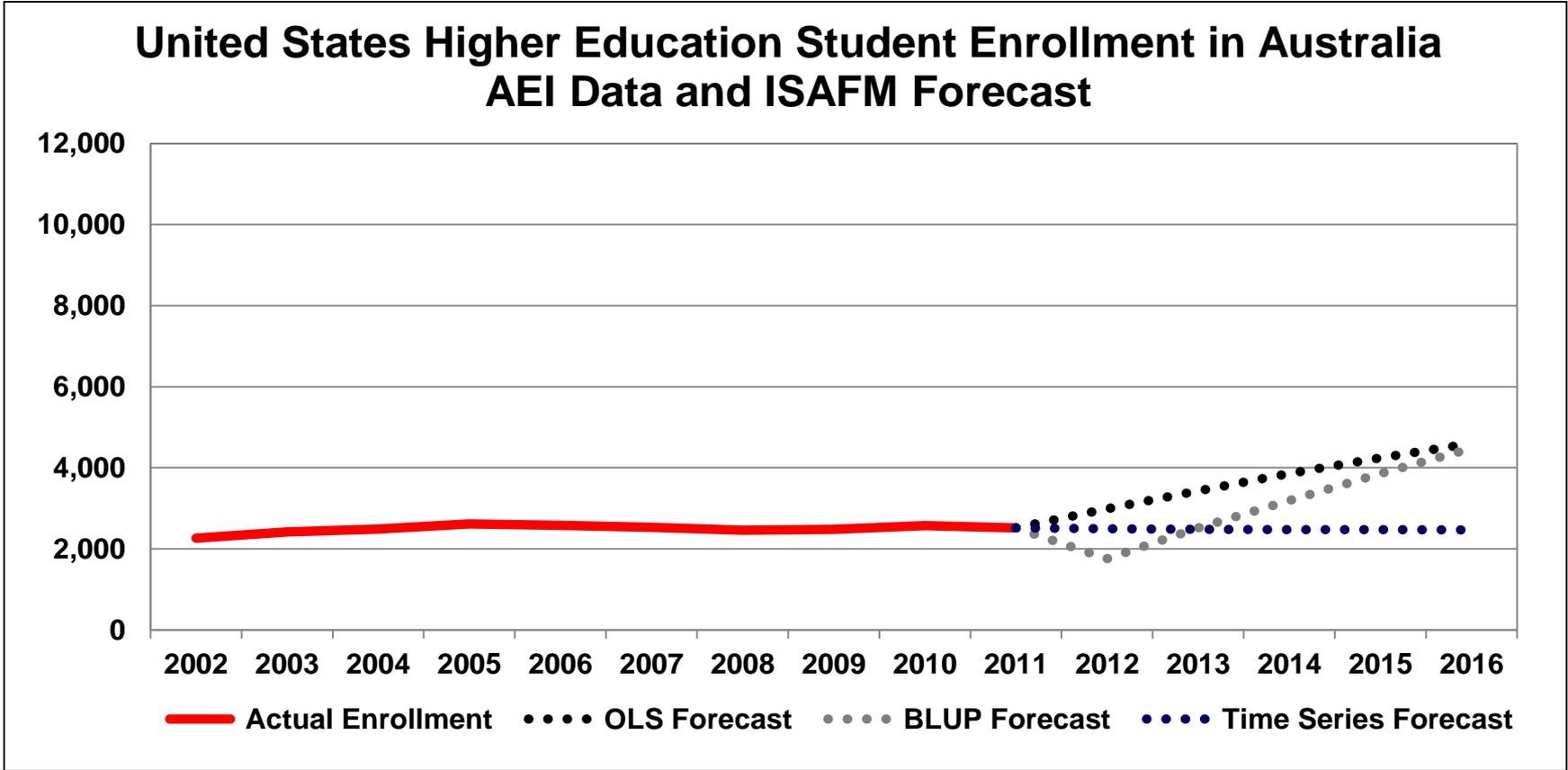
## Saudi Higher Education Student Enrollment



Sources: AEI, DEEWR and ISAFM.

# ISAFM FORECAST (VERSION 3): AUSTRALIA

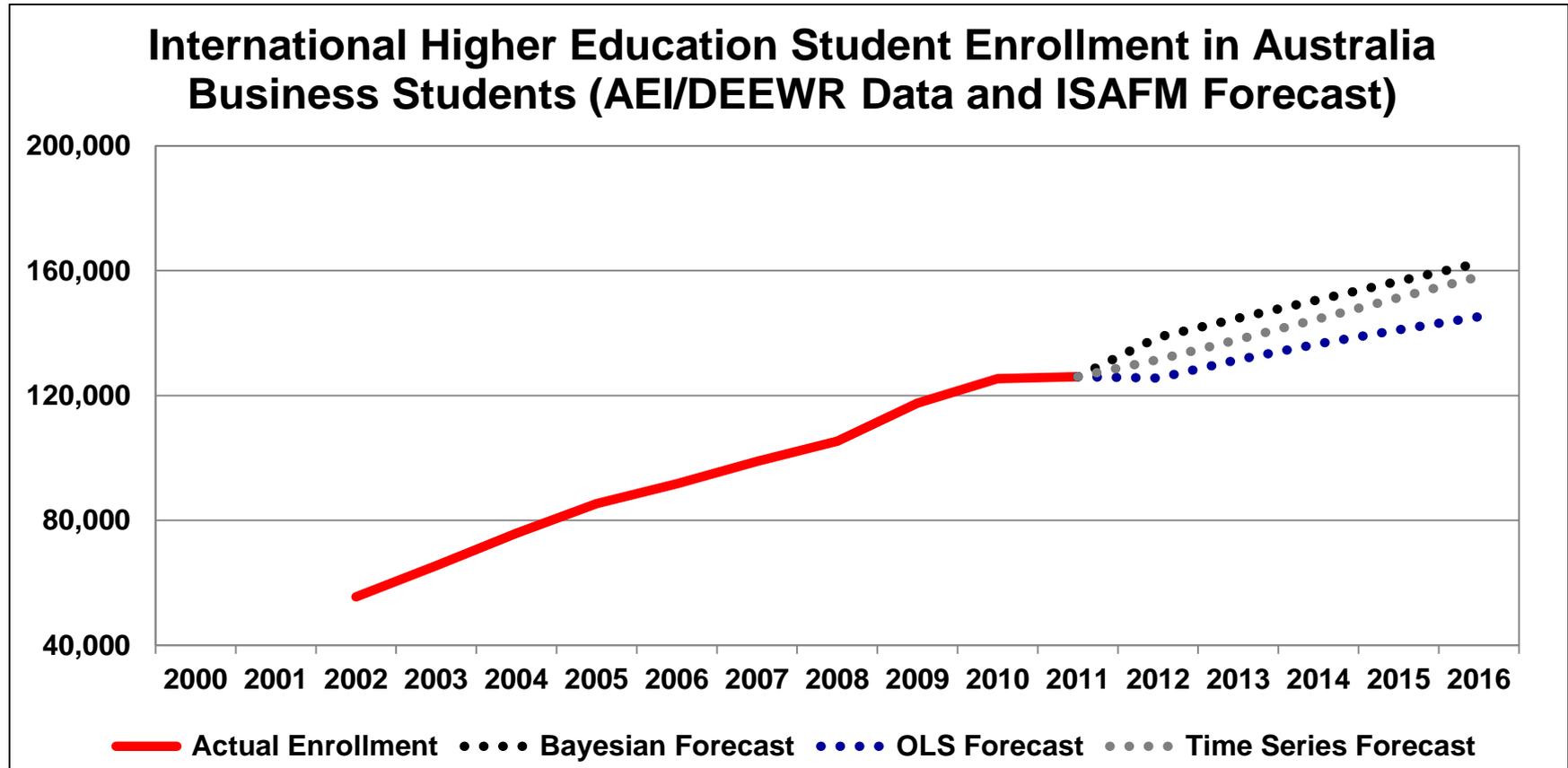
## United States Higher Education Student Enrollment



Sources: AEI, DEEWR and ISAFM.

# ISAFM FORECAST (VERSION 3): AUSTRALIA

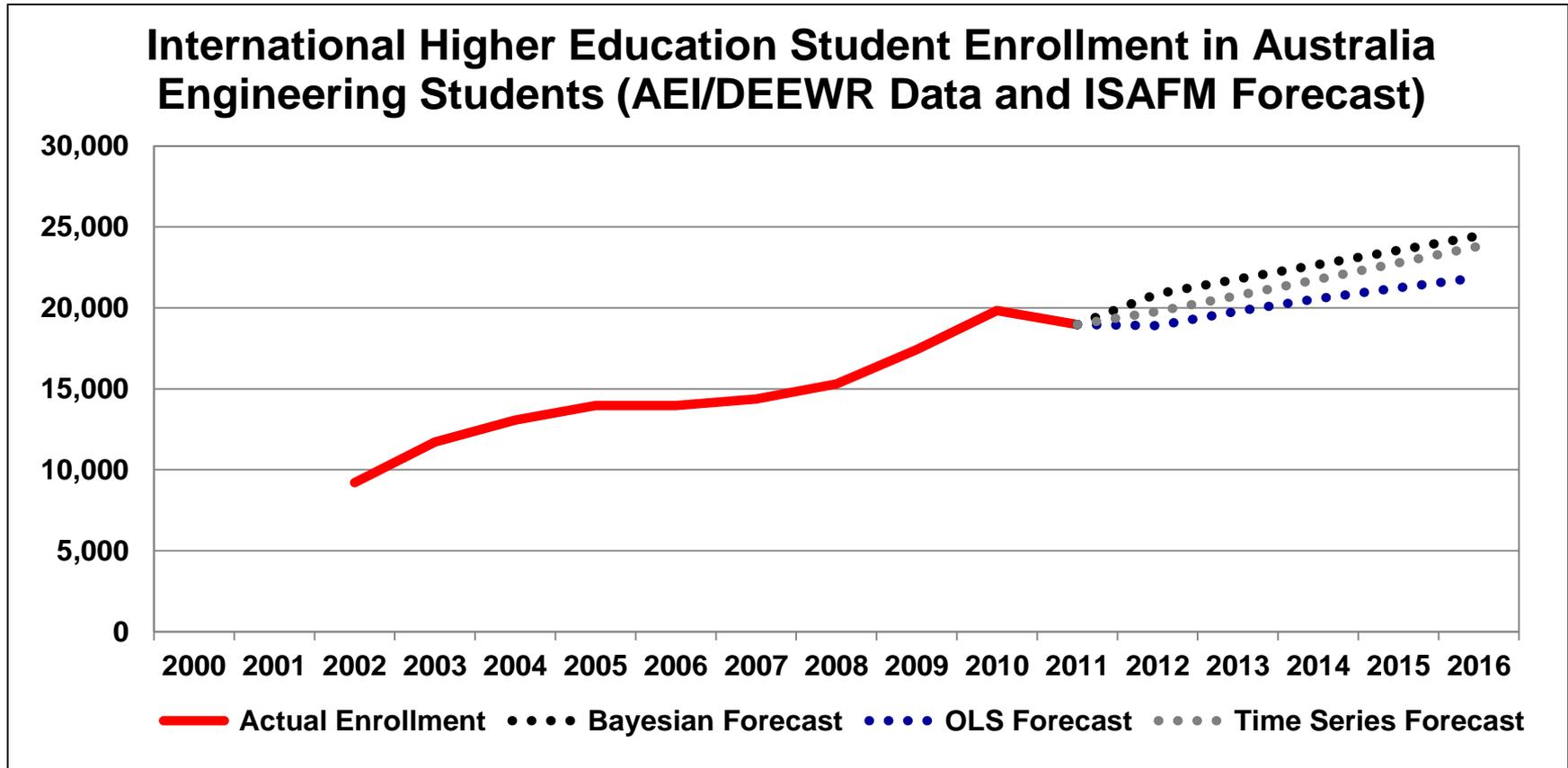
## International Higher Education Student Enrollment - Business



Notes: Actual enrollment data are based on both AEI total enrollments and DEEWR enrollment shares.  
Sources: AEI, DEEWR and ISAFM.

# ISAFM FORECAST (VERSION 3): AUSTRALIA

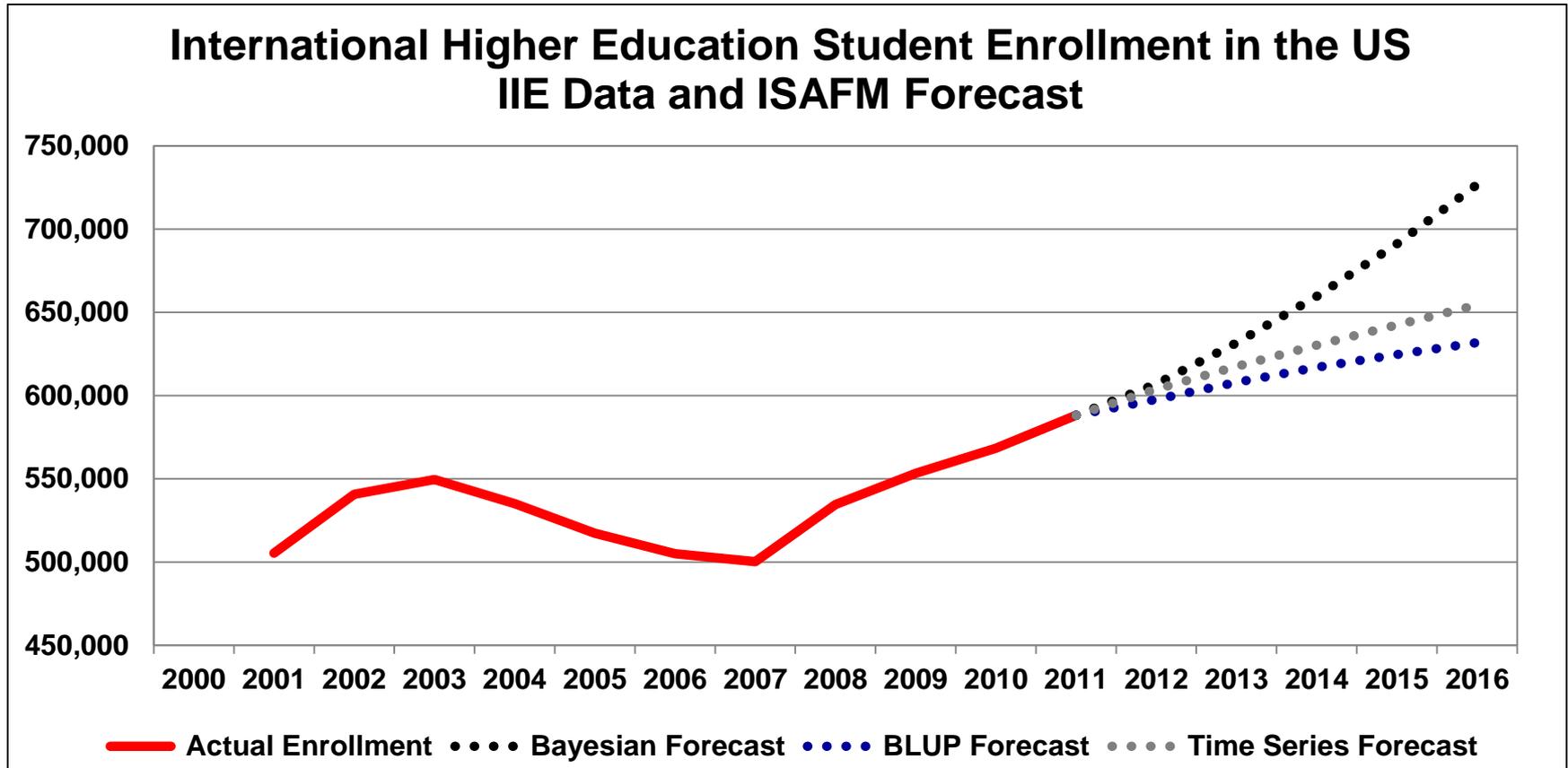
## International Higher Education Student Enrollment - Engineering



Notes: Actual enrollment data are based on both AEI total enrollments and DEEWR enrollment shares.  
Sources: AEI, DEEWR and ISAFM.

# ISAFM FORECAST (VERSION 3): USA

## Total International Higher Education Student Enrollment

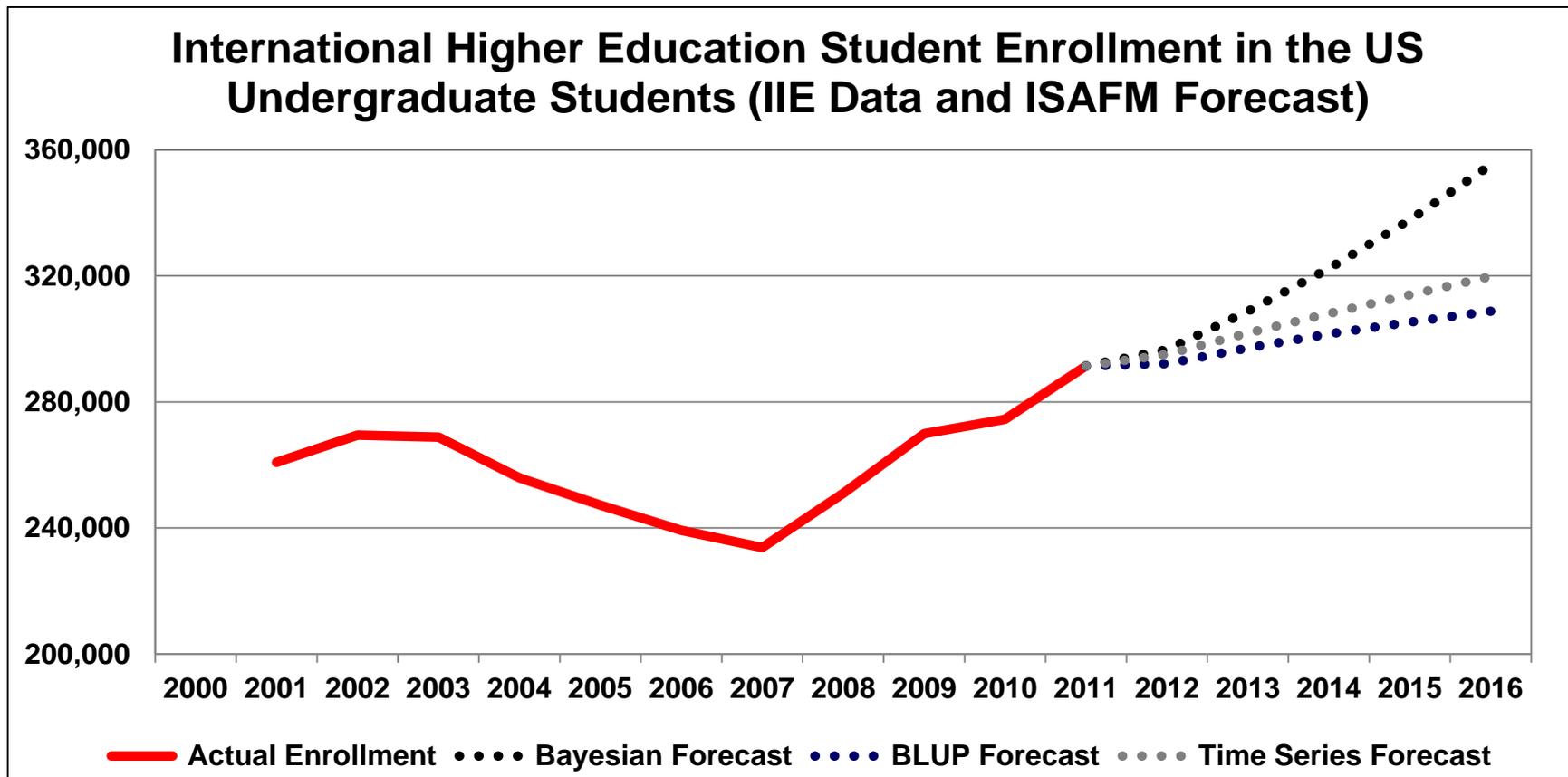


**Sustained growth likely**

Notes: Enrollment is the sum of IIE study levels "Graduate" and "Undergraduate". The "Other" study level is excluded.  
Sources: IIE and ISAFM.

# ISAFM FORECAST (VERSION 3): USA

## Undergraduate International Higher Education Student Enrollment

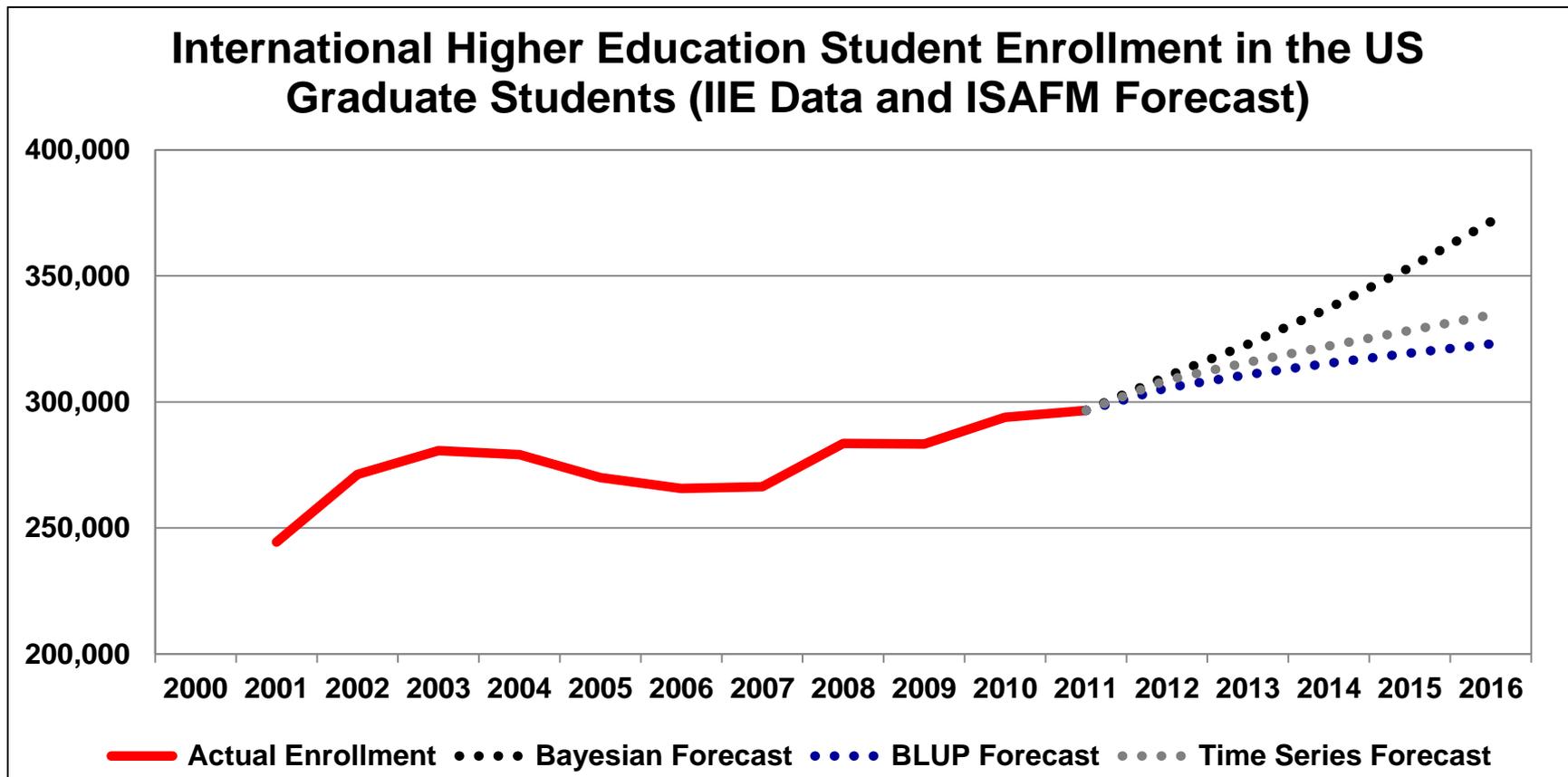


**Strong uptick possible**

Sources: IIE and ISAFM.

# ISAFM FORECAST (VERSION 3): USA

## Graduate International Higher Education Student Enrollment

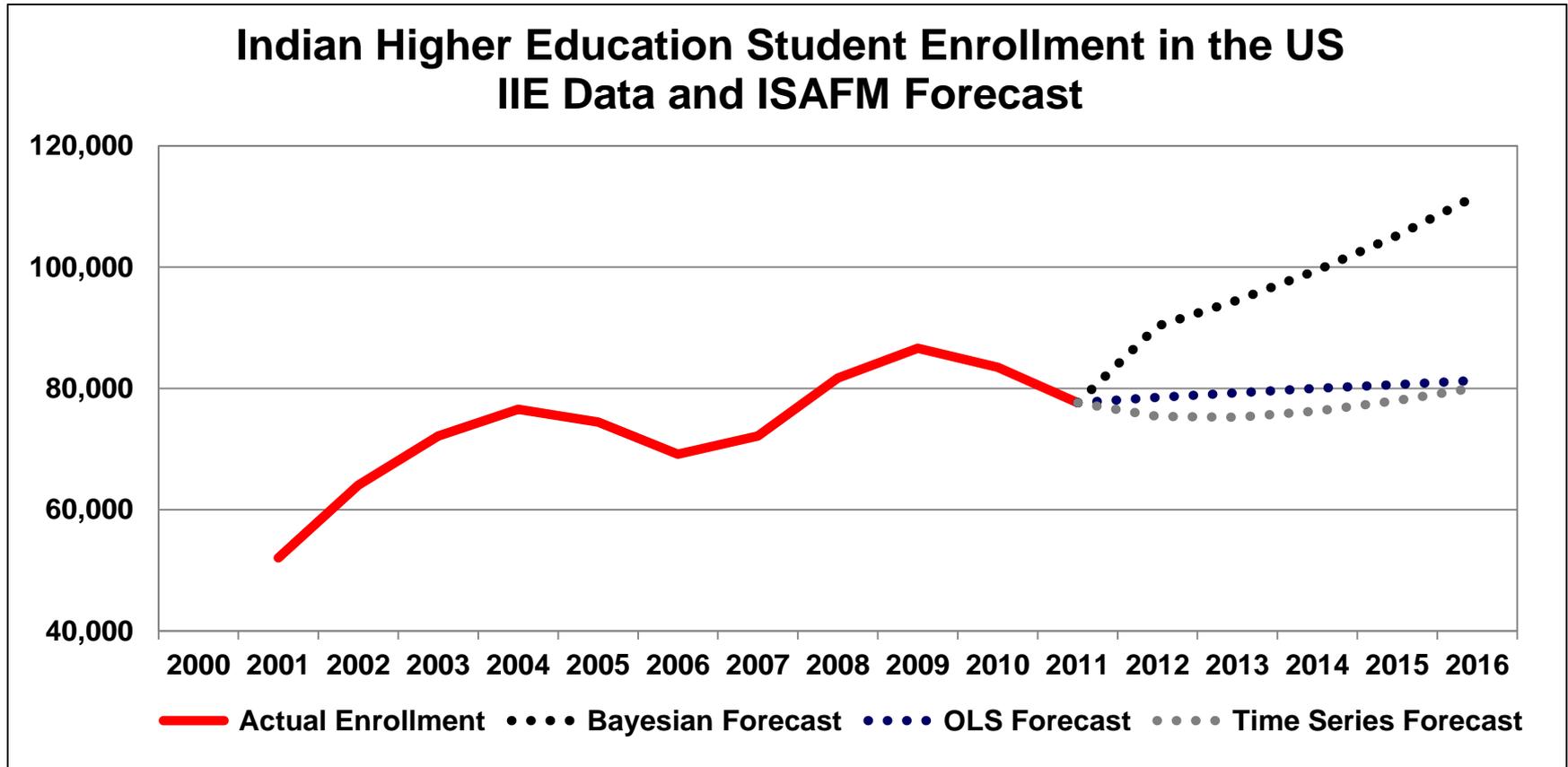


**Moderate but sustained growth**

Sources: IIE and ISAFM.

# ISAFM FORECAST (VERSION 3): USA

## Indian Higher Education Student Enrollment

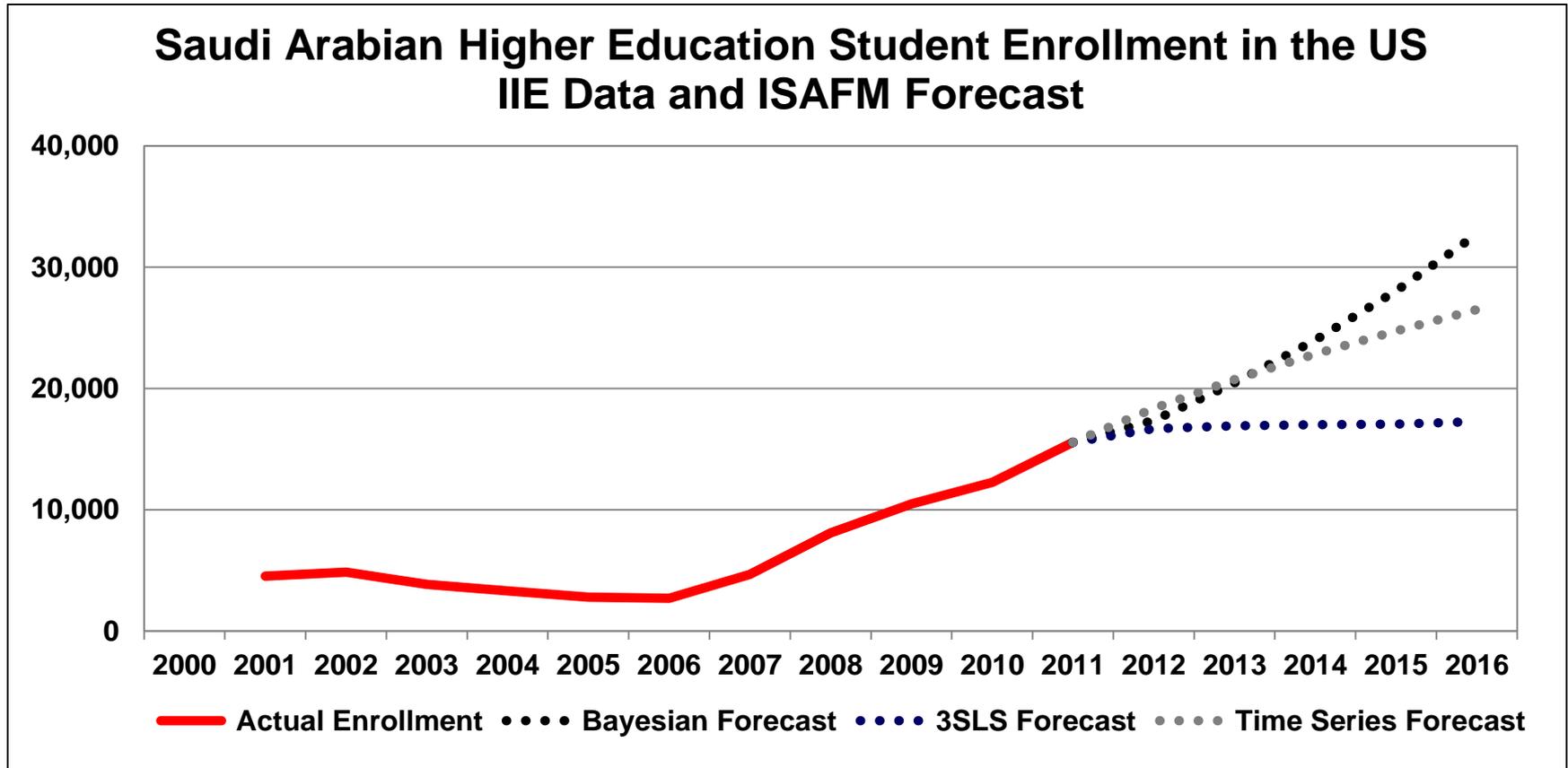


**Flat at best owing to workforce conditions**

Notes: Enrollment is the sum of IIE study levels "Graduate" and "Undergraduate". The "Other" study level is excluded.  
Sources: IIE and ISAFM.

# ISAFM FORECAST (VERSION 3): USA

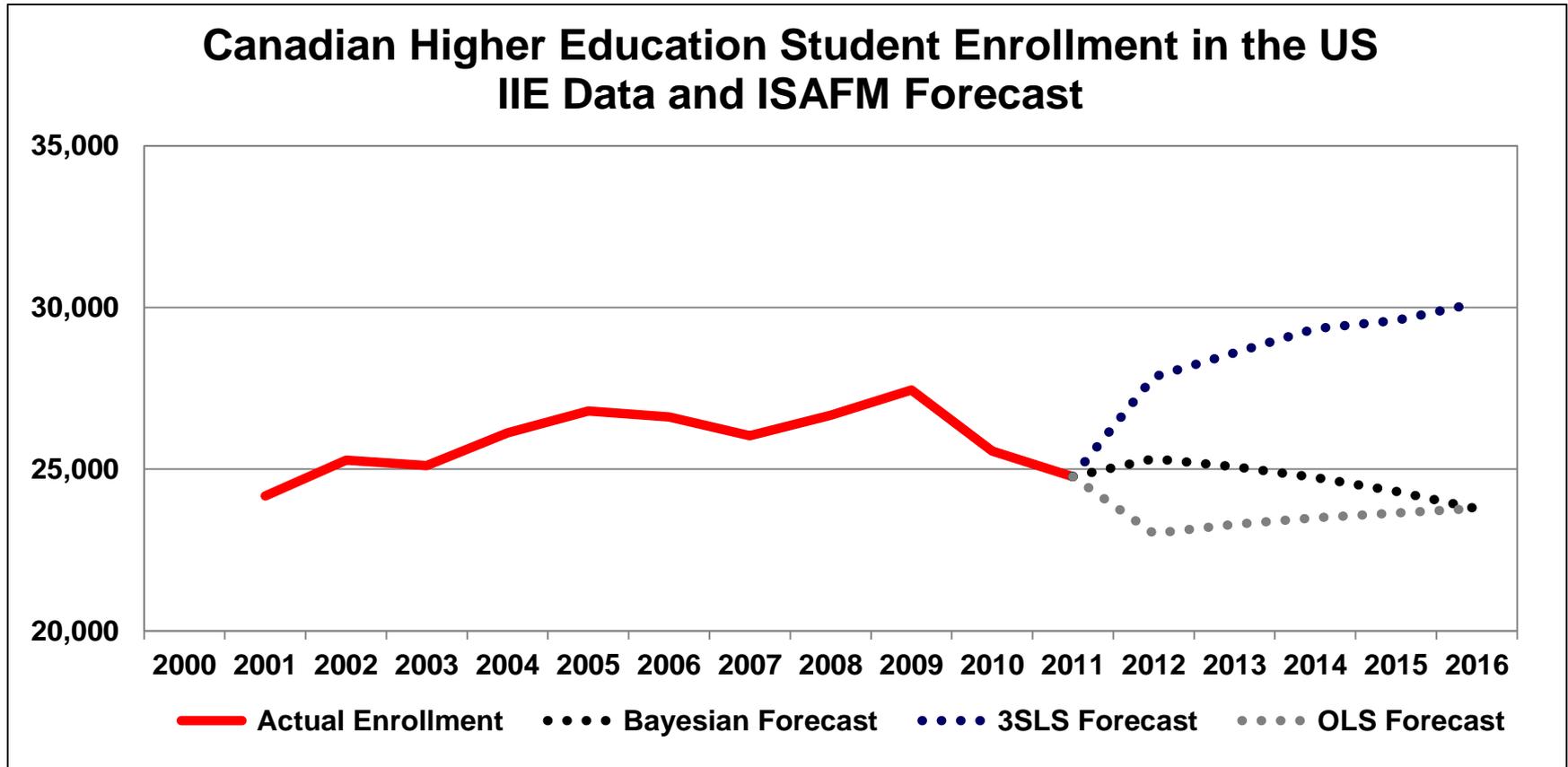
## Saudi Higher Education Student Enrollment



**“Governed” growth**

Notes: Enrollment is the sum of IIE study levels "Graduate" and "Undergraduate". The "Other" study level is excluded.  
Sources: IIE and ISAFM.

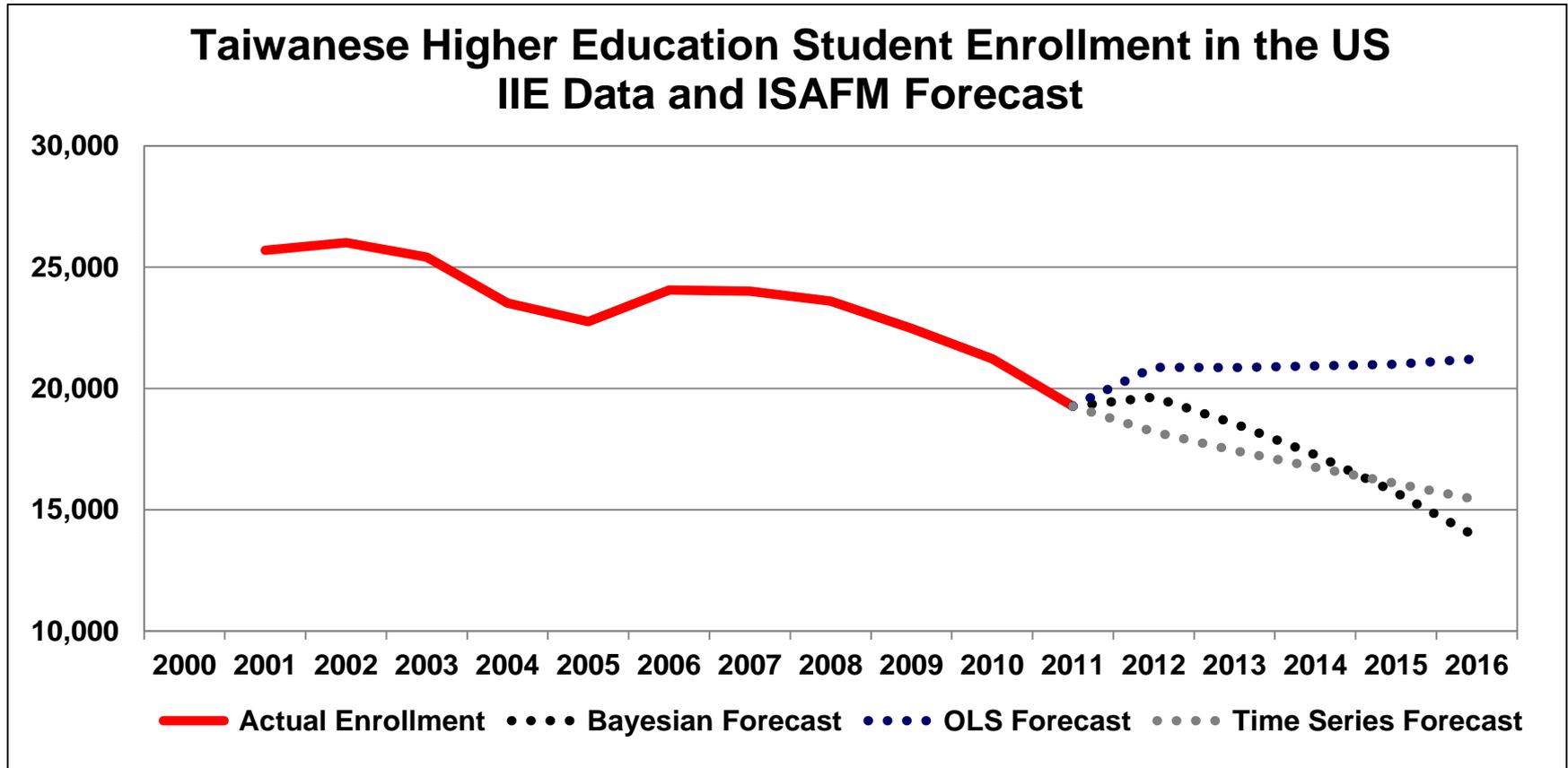
# ISAFM FORECAST (VERSION 3): USA Canadian Higher Education Student Enrollment



Notes: Enrollment is the sum of IIE study levels "Graduate" and "Undergraduate". The "Other" study level is excluded.  
Sources: IIE and ISAFM.

# ISAFM FORECAST (VERSION 3): USA

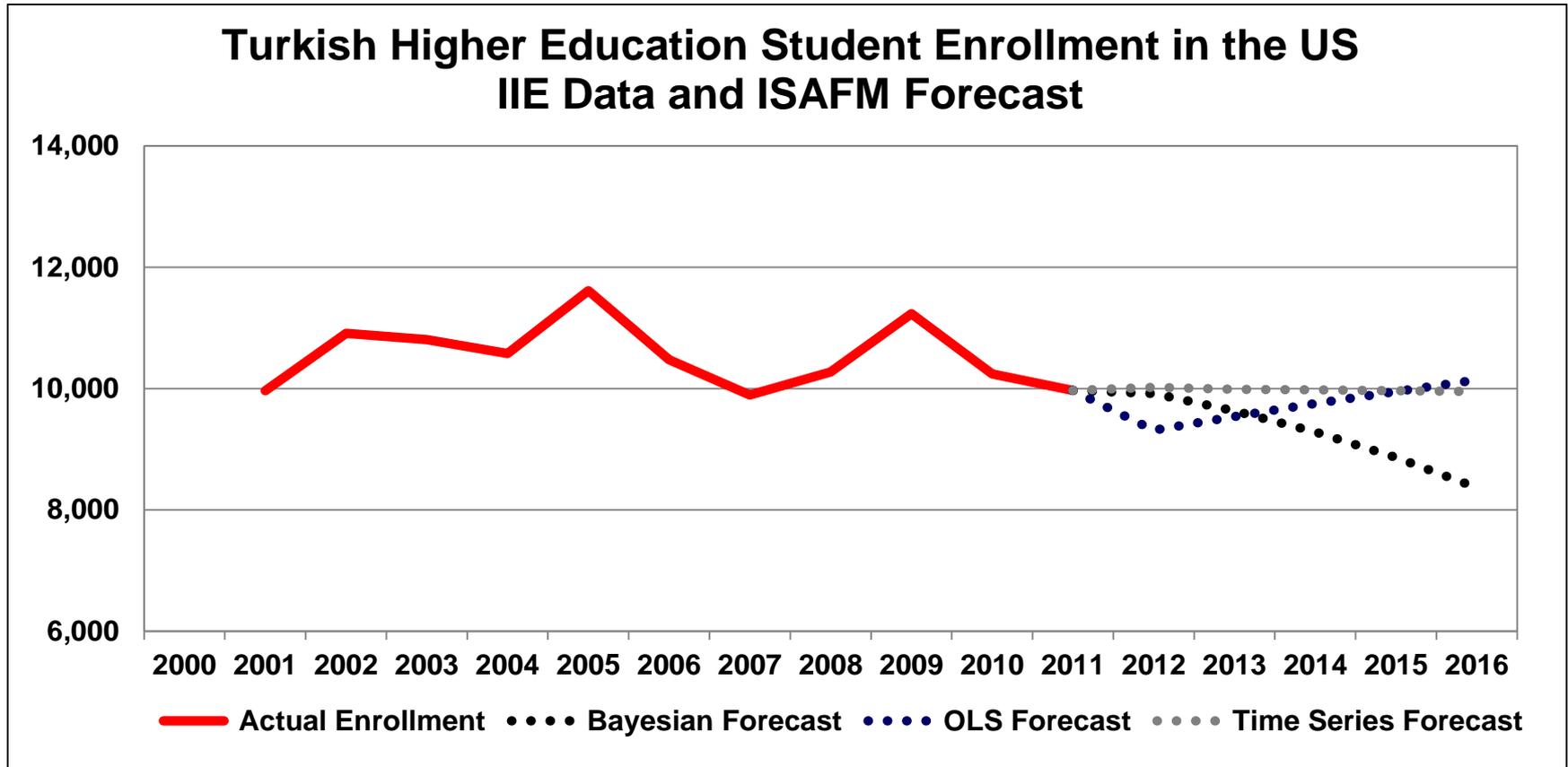
## Taiwanese Higher Education Student Enrollment



Notes: Enrollment is the sum of IIE study levels "Graduate" and "Undergraduate". The "Other" study level is excluded.  
Sources: IIE and ISAFM.

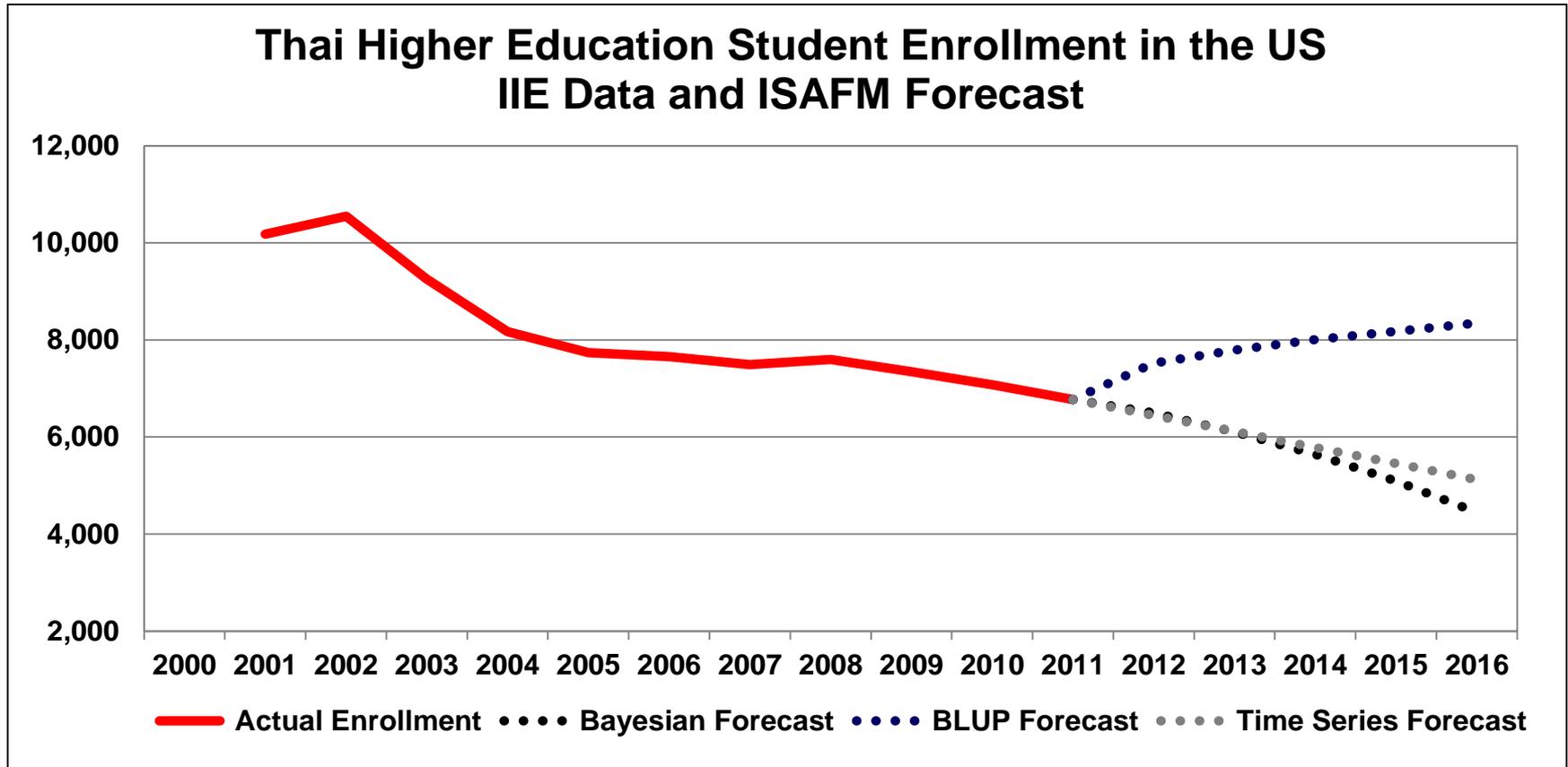
# ISAFM FORECAST (VERSION 3): USA

## Turkish Higher Education Student Enrollment



Notes: Enrollment is the sum of IIE study levels "Graduate" and "Undergraduate". The "Other" study level is excluded.  
Sources: IIE and ISAFM.

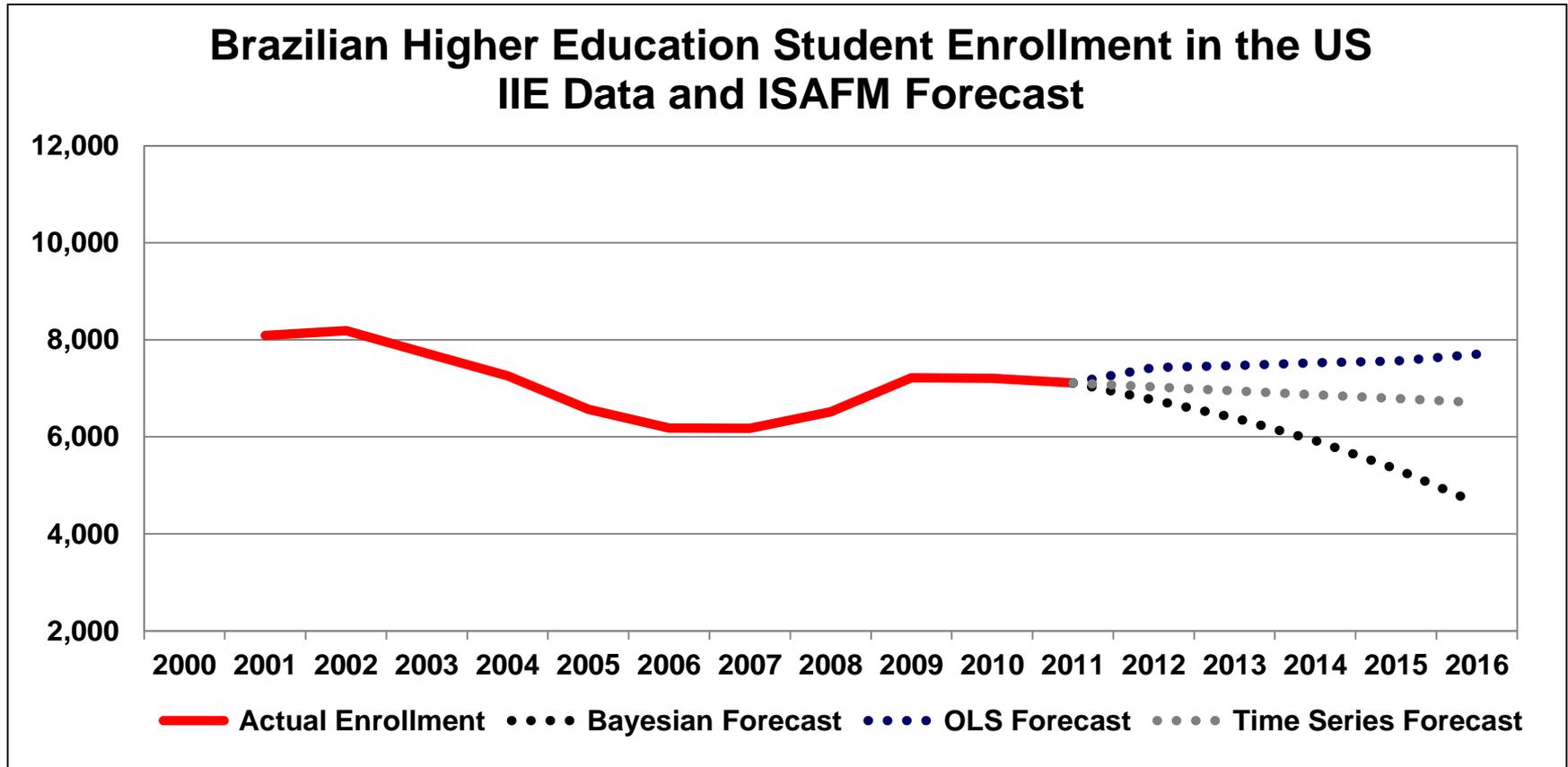
# ISAFM FORECAST (VERSION 3): USA Thai Higher Education Student Enrollment



Notes: Enrollment is the sum of IIE study levels "Graduate" and "Undergraduate". The "Other" study level is excluded.  
Sources: IIE and ISAFM.

# ISAFM FORECAST (VERSION 3): USA

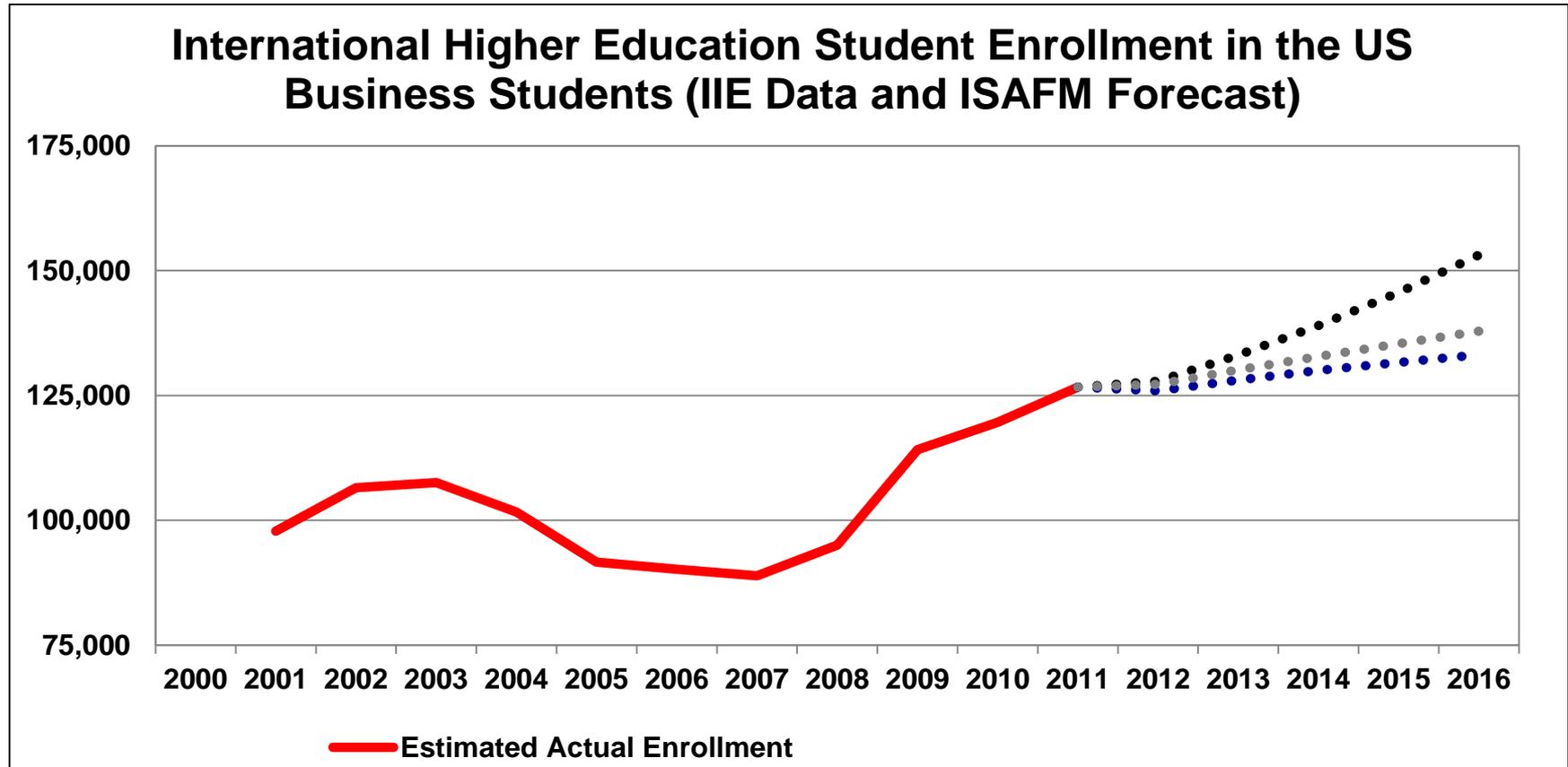
## Brazilian Higher Education Student Enrollment



Notes: Enrollment is the sum of IIE study levels "Graduate" and "Undergraduate". The "Other" study level is excluded.  
Sources: IIE and ISAFM.

# ISAFM FORECAST (VERSION 3): USA

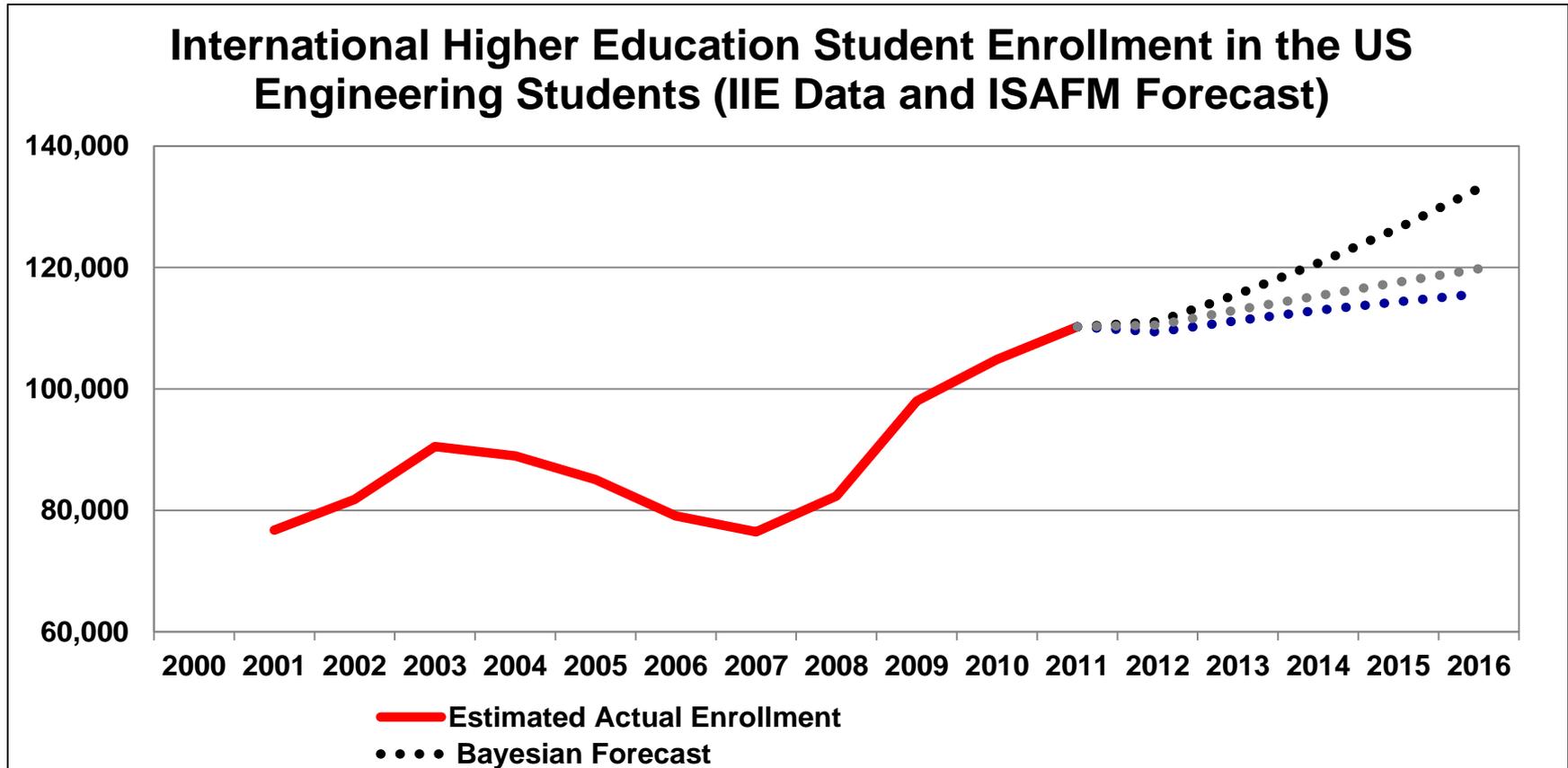
## International Higher Education Student Enrollment - Business



Notes: Enrollment is based on IIE enrollment shares and the sum of study levels "Graduate" and "Undergraduate".  
Sources: IIE and ISAFM.

# ISAFM FORECAST (VERSION 3): USA

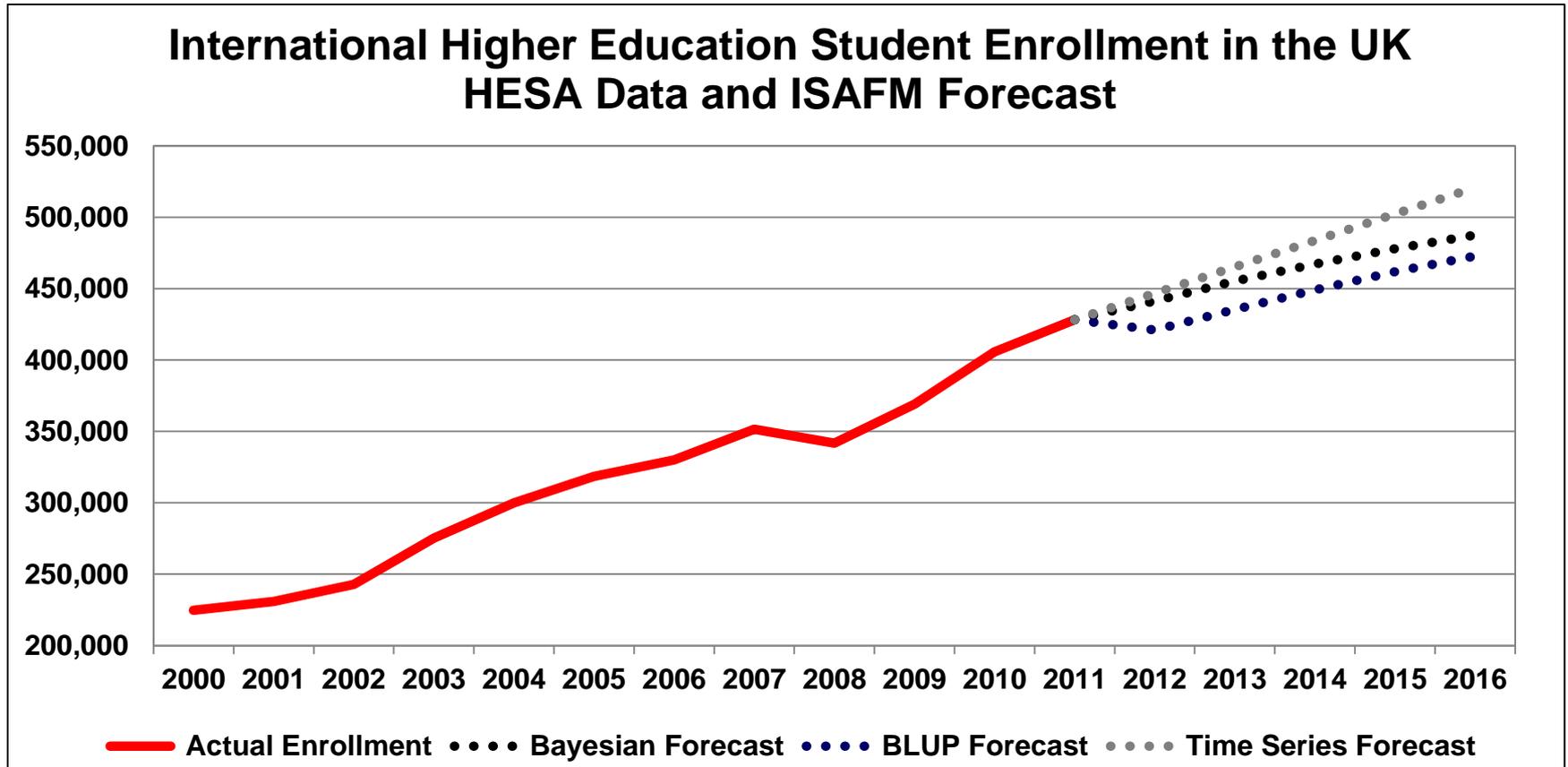
## International Higher Education Student Enrollment - Engineering



Notes: Enrollment is the sum of IIE study levels "Graduate" and "Undergraduate". The "Other" study level is excluded.  
Sources: IIE and ISAFM.

# ISAFM FORECAST (VERSION 3): UK

## Total International Higher Education Student Enrollment

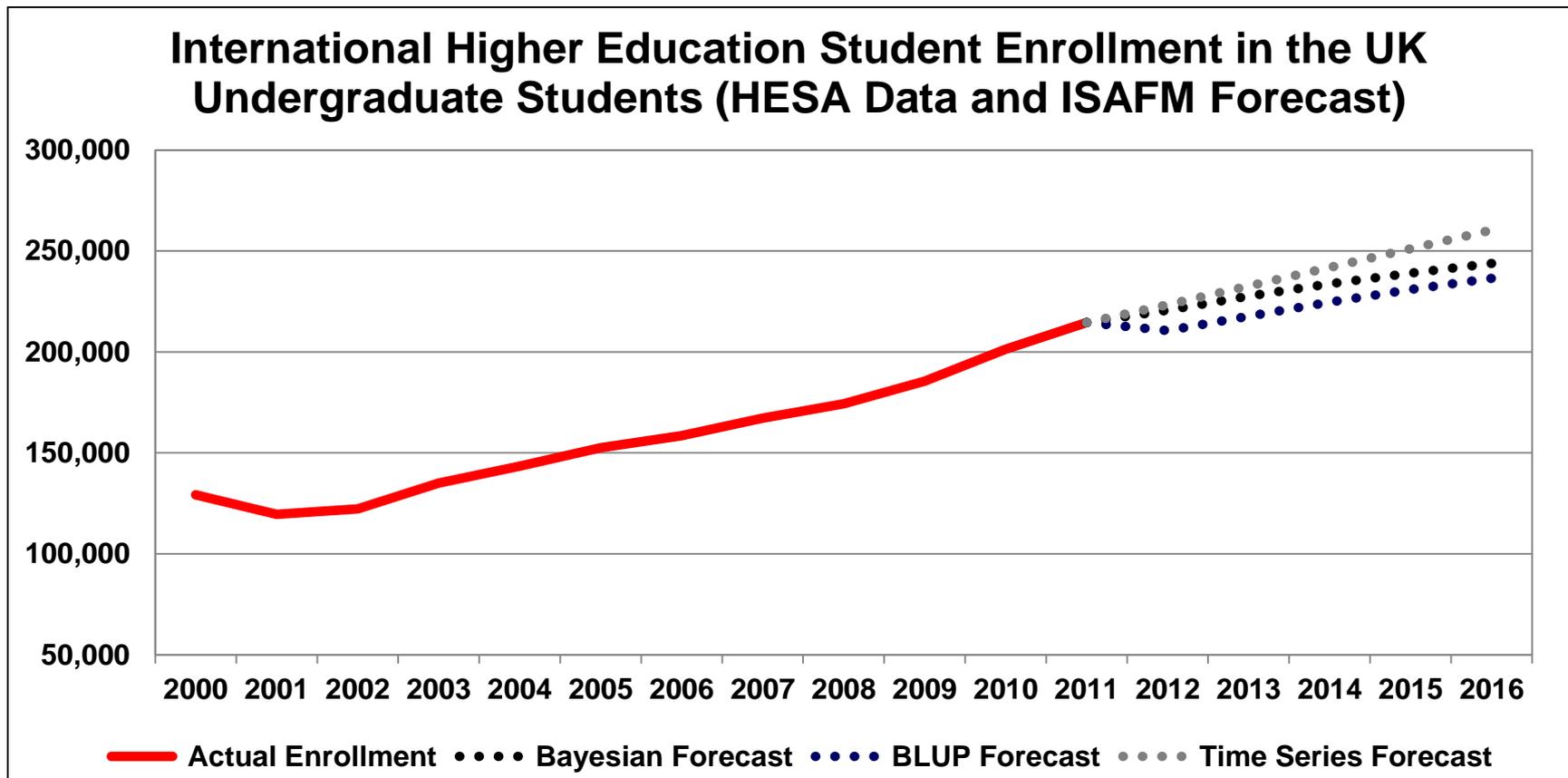


**The UK is a big question mark – historical data may not guide well**

Notes: Actual enrollment data are based on HESA total enrollment ("Non-UK domiciled HE students") and HESA enrollment shares.  
Sources: HESA and ISAFM.

# ISAFM FORECAST (VERSION 3): UK

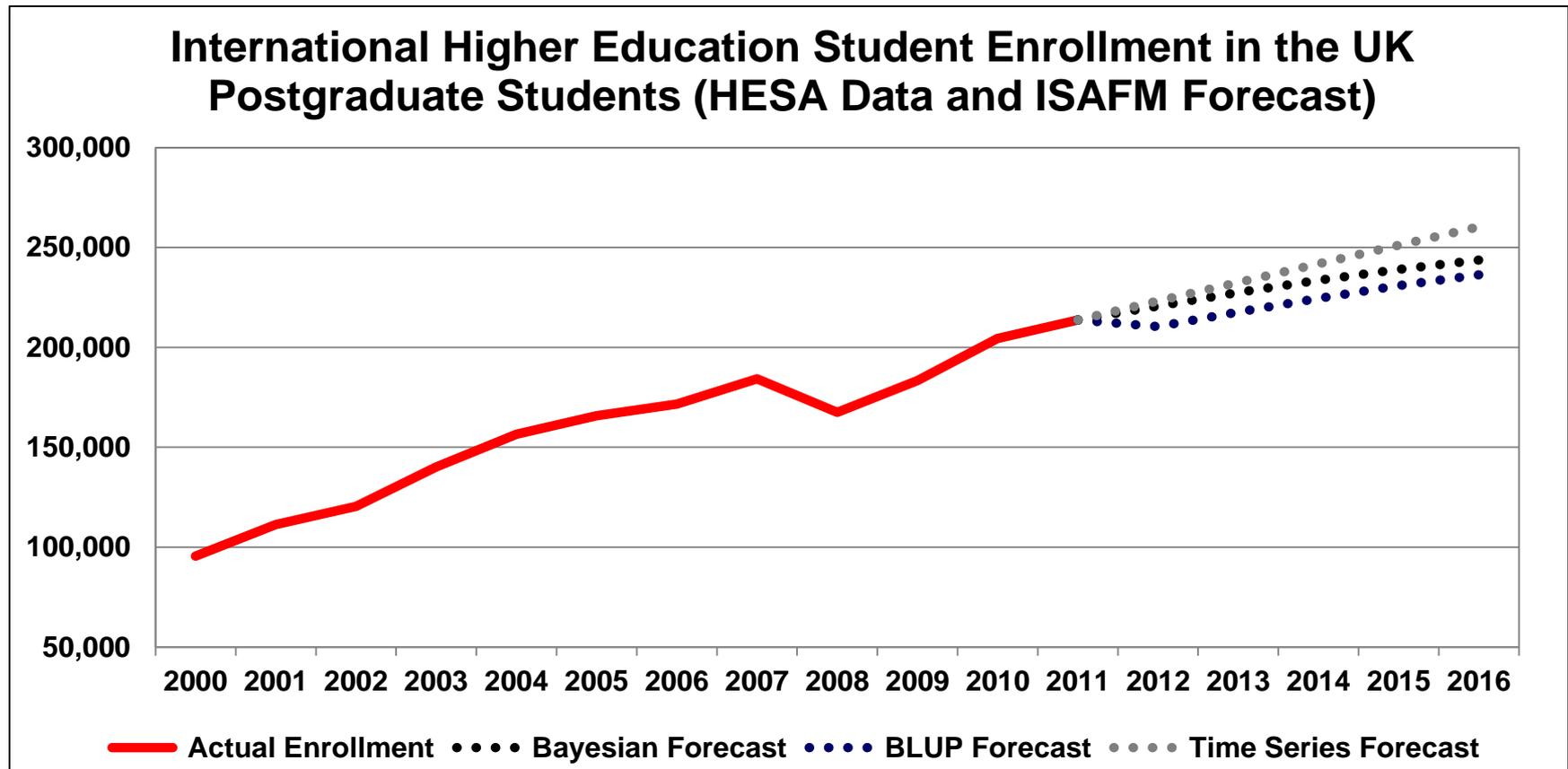
## Undergraduate International Higher Education Student Enrollment



Notes: Notes: Actual enrollment data are based on HESA total enrollment ("Non-UK domiciled HE students") and HESA enrollment shares.  
 Sources: HESA and ISAFM.

# ISAFM FORECAST (VERSION 3): UK

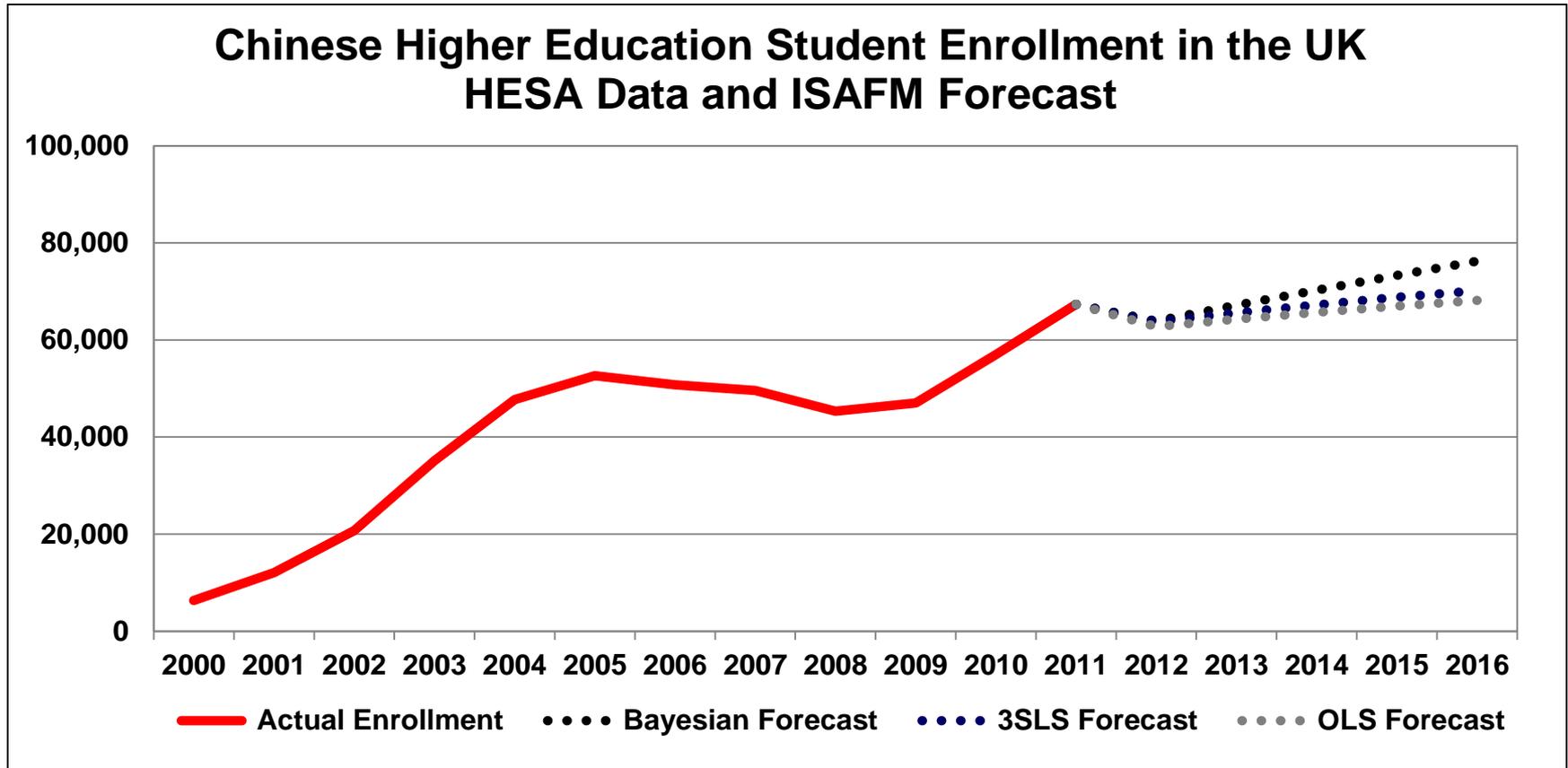
## Postgraduate International Higher Education Student Enrollment



Notes: Actual enrollment data are based on HESA total enrollment ("Non-UK domiciled HE students") and HESA enrollment shares.  
Sources: HESA and ISAFM.

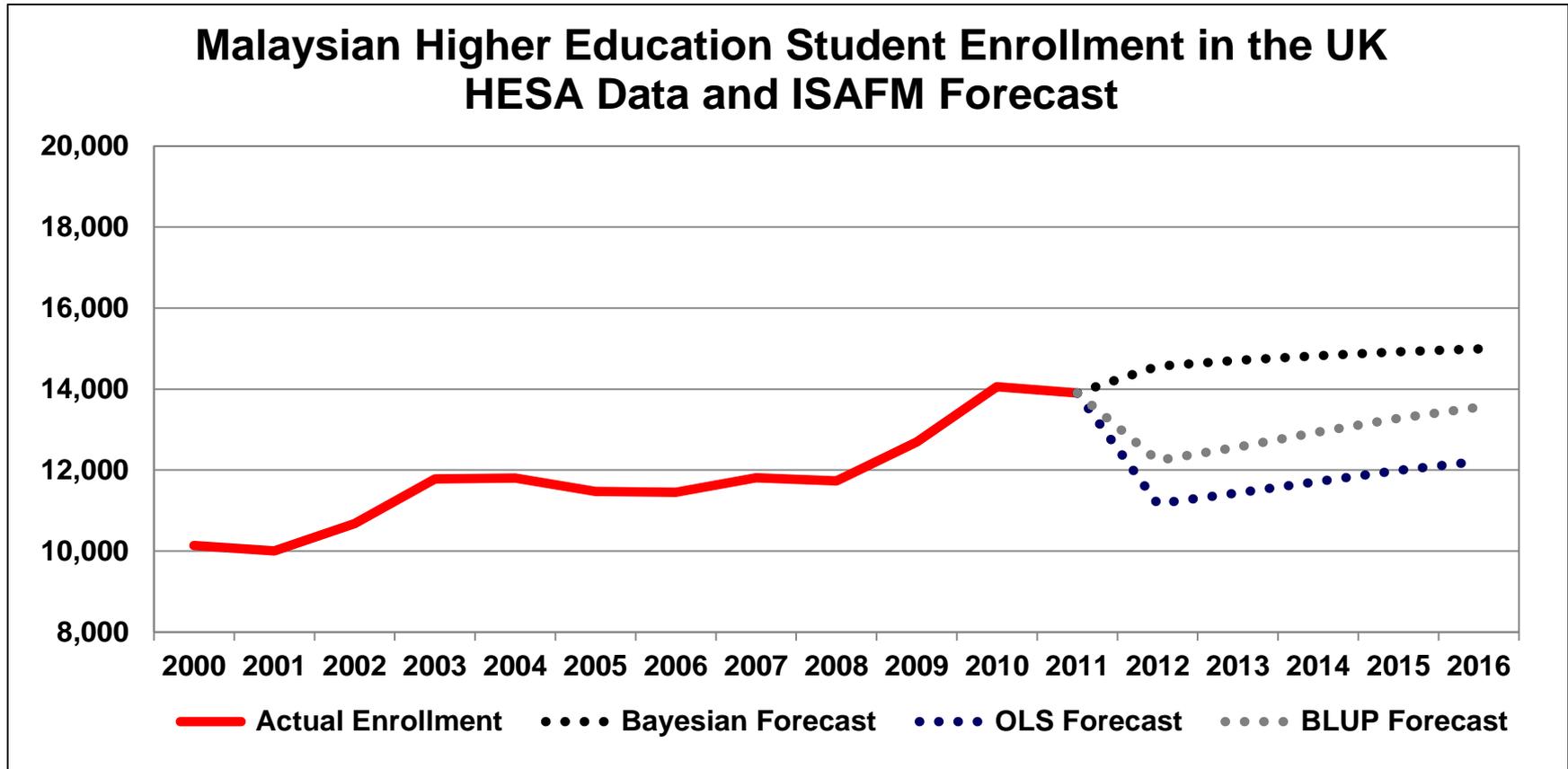
# ISAFM FORECAST (VERSION 3): UK

## Chinese Higher Education Student Enrollment



Notes: Notes: Actual enrollment data are based on HESA total enrollment ("Non-UK domiciled HE students") and HESA enrollment shares.  
Sources: HESA and ISAFM.

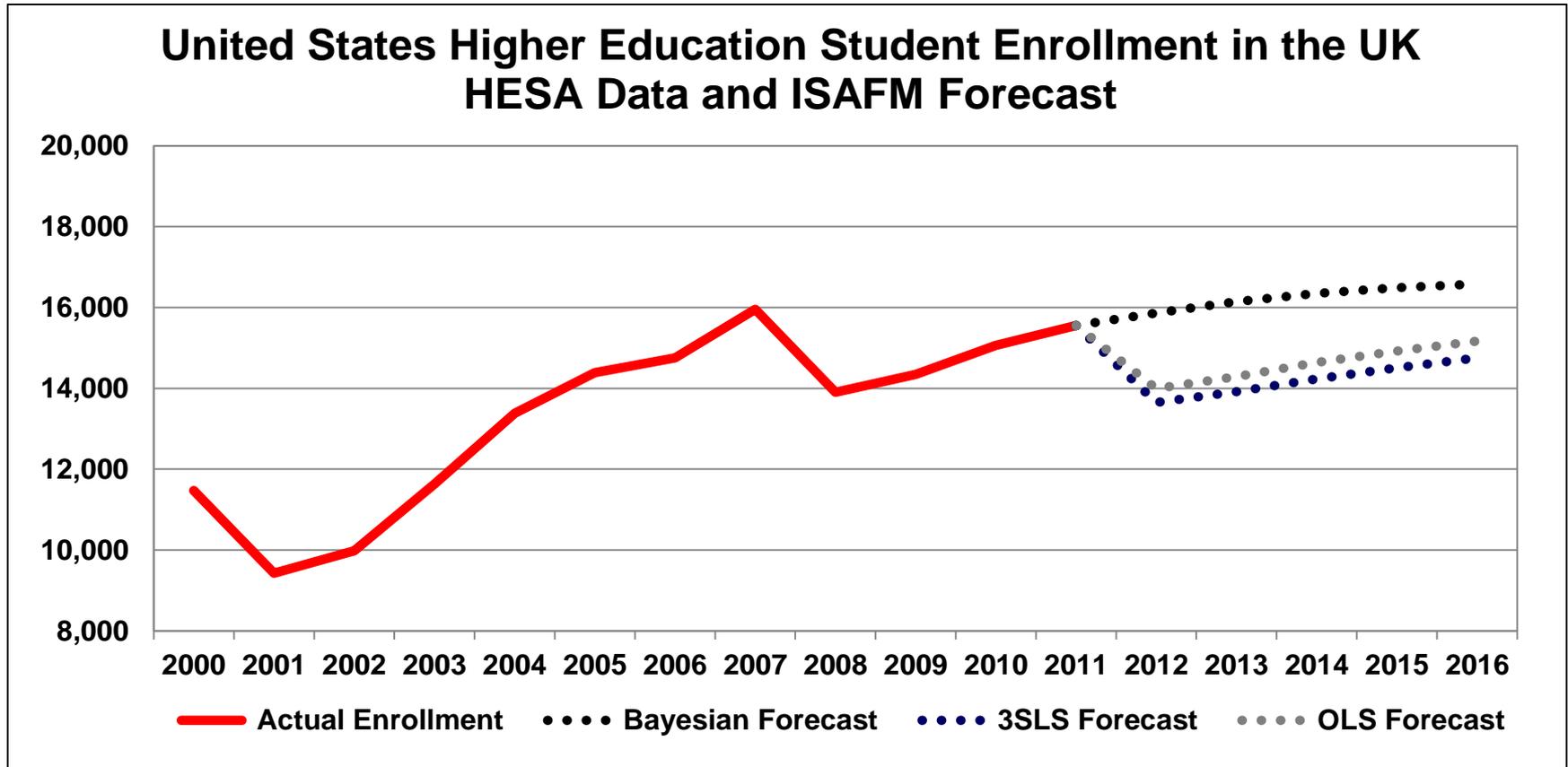
# ISAFM FORECAST (VERSION 3): UK Malaysian Higher Education Student Enrollment



Notes: Notes: Actual enrollment data are based on HESA total enrollment ("Non-UK domiciled HE students") and HESA enrollment shares.  
Sources: HESA and ISAFM.

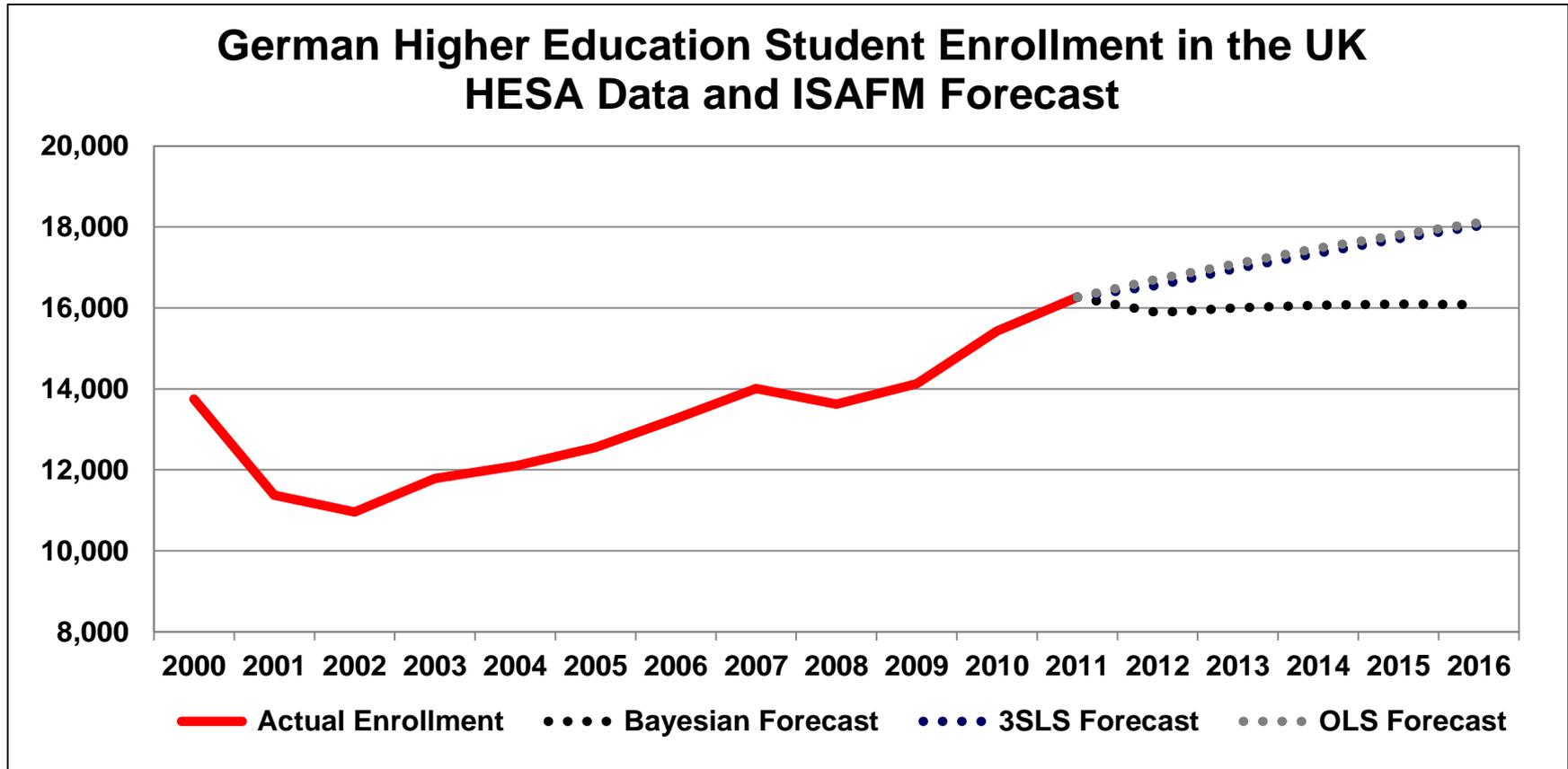
# ISAFM FORECAST (VERSION 3): UK

## United States Higher Education Student Enrollment



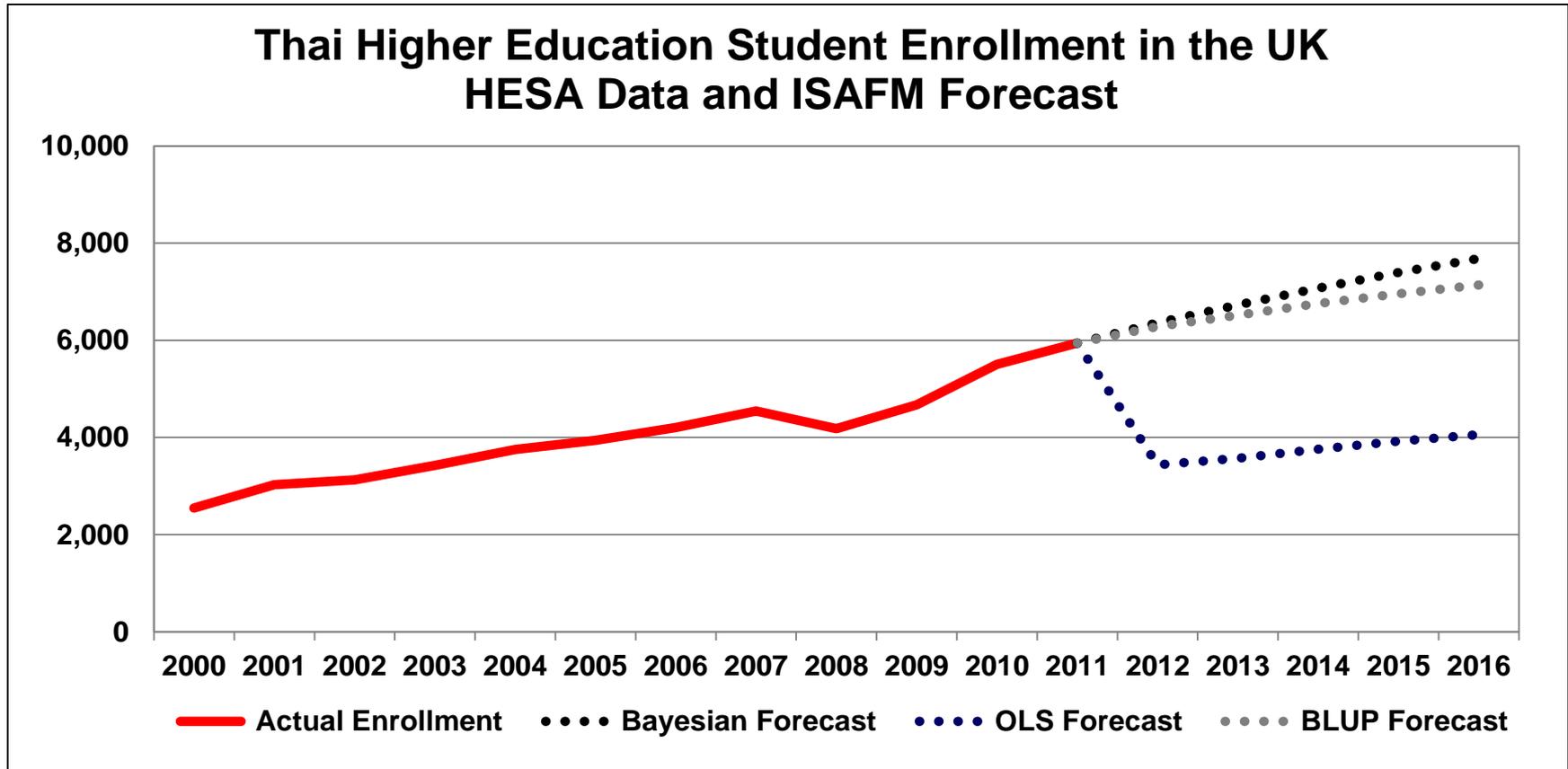
Notes: Notes: Actual enrollment data are based on HESA total enrollment ("Non-UK domiciled HE students") and HESA enrollment shares.  
Sources: HESA and ISAFM.

# ISAFM FORECAST (VERSION 3): UK German Higher Education Student Enrollment



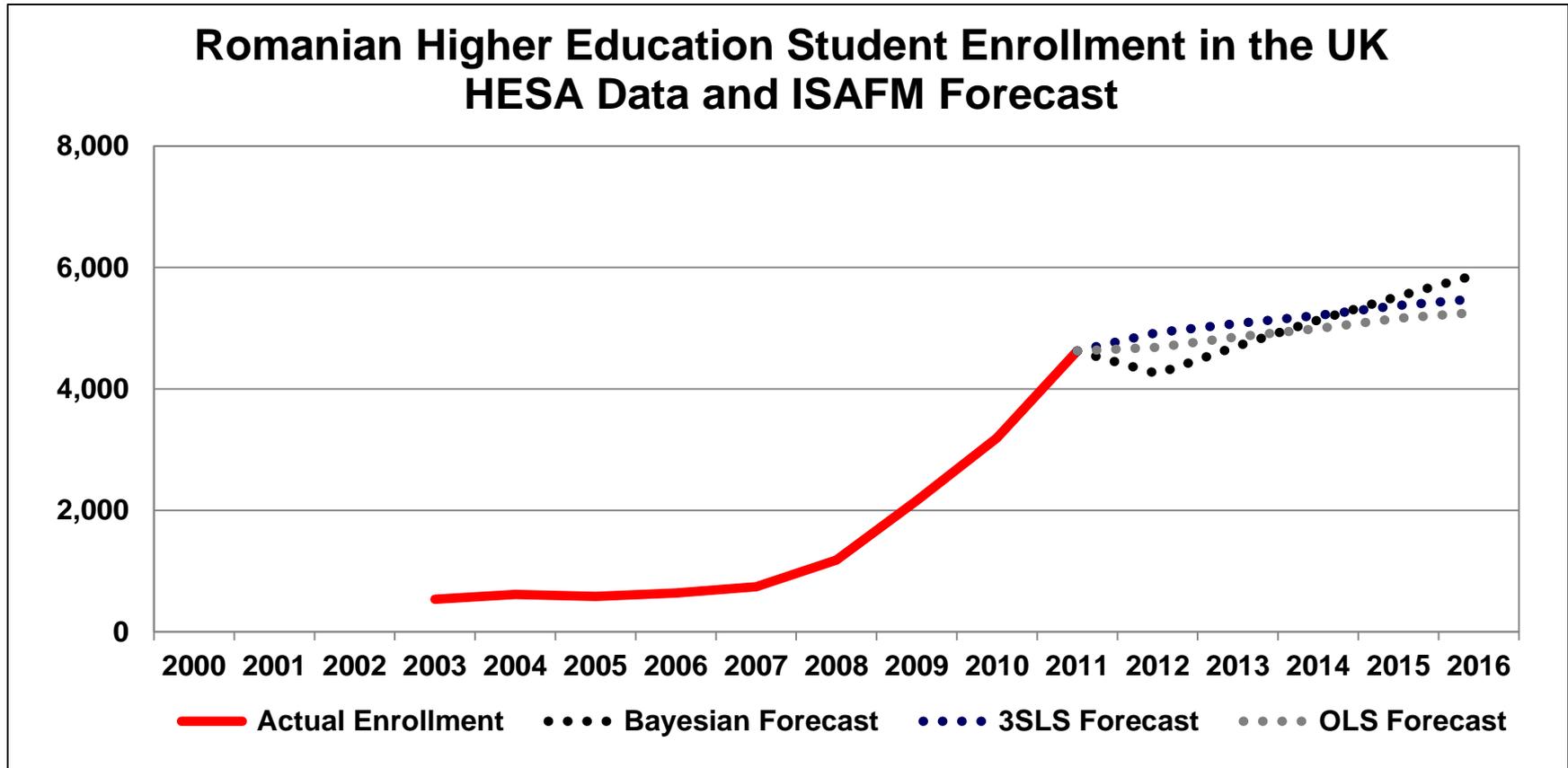
Notes: Notes: Actual enrollment data are based on HESA total enrollment ("Non-UK domiciled HE students") and HESA enrollment shares.  
Sources: HESA and ISAFM.

# ISAFM FORECAST (VERSION 3): UK Thai Higher Education Student Enrollment



Notes: Notes: Actual enrollment data are based on HESA total enrollment ("Non-UK domiciled HE students") and HESA enrollment shares.  
Sources: HESA and ISAFM.

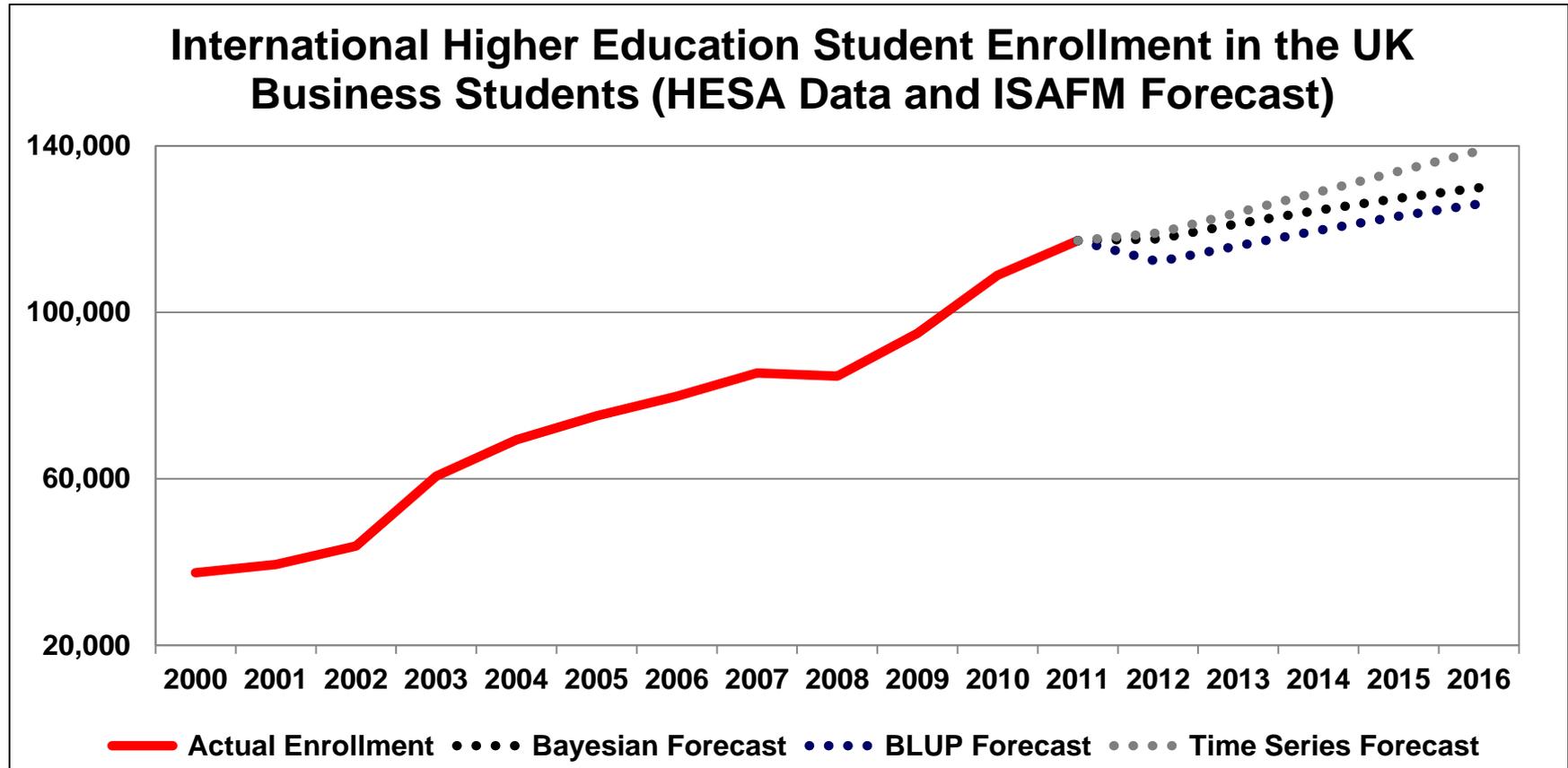
# ISAFM FORECAST (VERSION 3): UK Romanian Higher Education Student Enrollment



Notes: Notes: Actual enrollment data are based on HESA total enrollment ("Non-UK domiciled HE students") and HESA enrollment shares.  
Sources: HESA and ISAFM.

# ISAFM FORECAST (VERSION 3): UK

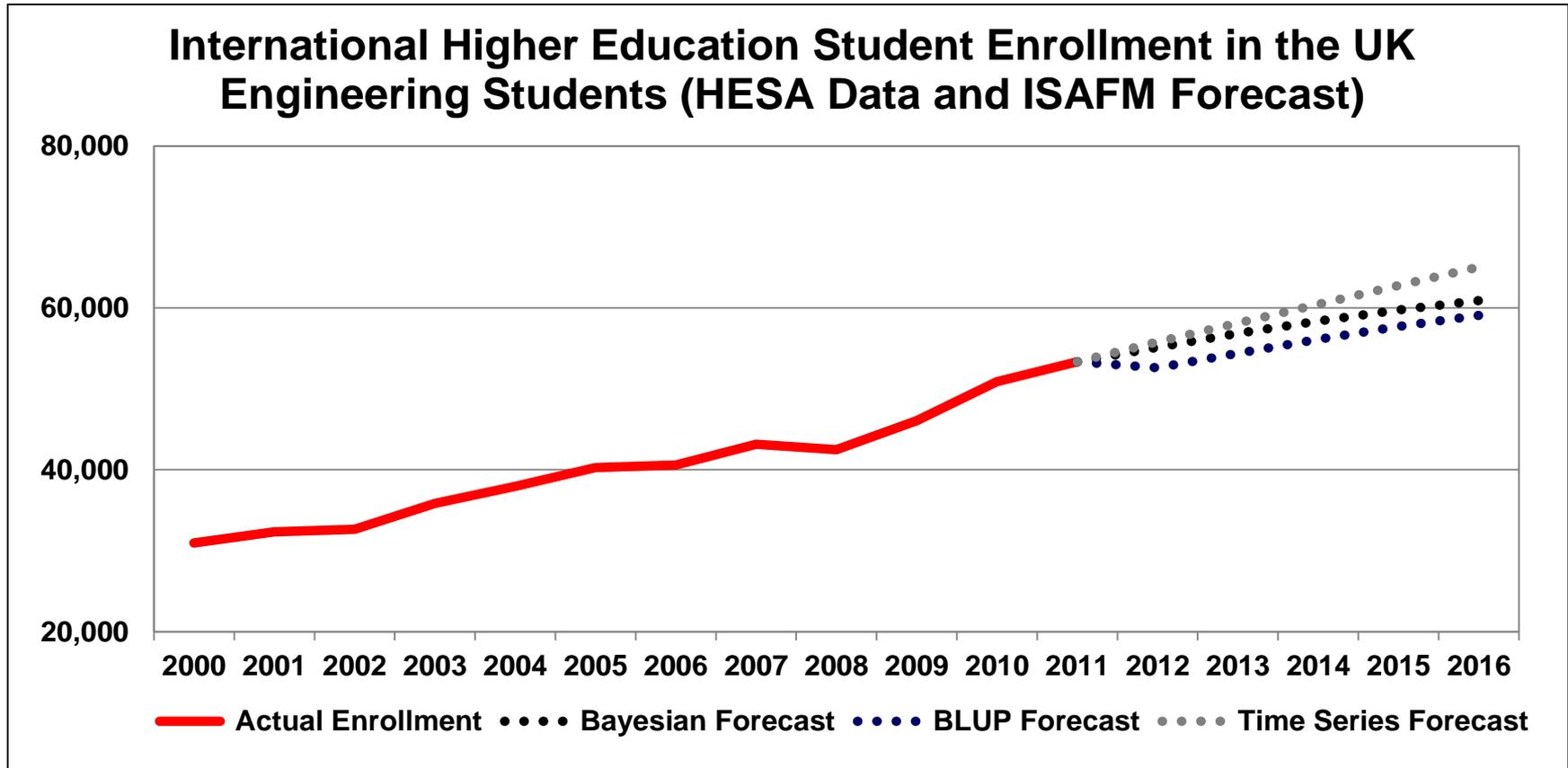
## International Higher Education Student Enrollment - Business



Notes: Actual enrollment data are based on HESA total enrollment ("Non-UK domiciled HE students") and HESA enrollment shares.  
Sources: HESA and ISAFM.

# ISAFM FORECAST (VERSION 3): UK

## International Higher Education Student Enrollment - Engineering



Notes: Notes: Actual enrollment data are based on HESA total enrollment ("Non-UK domiciled HE students") and HESA enrollment shares.  
Sources: HESA and ISAFM.

**Welcome**

**ISAFM Team**

**ISAFM Introduction**

**ISAFM Methodology**

**ISAFM Forecast (v1.1)**

**ISAFM Forecast (v1.1-2)**

**ISAFM Forecast (v1.1-3)**

**Discussion**

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**Managing Director**

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